2008 University of Idaho Combined Research and Extension Plan of Work

I. Plan Overview

1. Brief Summary about Plan Of Work

The University of Idaho (UI) Plan of Work (POW) includes individual POWs developed by each of 21 Topic Teams (described in detail in this POW). These teams include: a) Extension specialists with joint extension and research appointments, b) research scientists with full research appointments, c) faculty with joint research and extension or teaching appointments, and d) county Extension educators with extension-only appointments. Development of each of the Topic Teams was faculty driven and aligns with at least one of the nine key signature programs established in 2005 by the College of Agricultural and Life Sciences (CALS), UI Extension, and the Idaho Agricultural Experiment Station (IAES). The CALS signature program areas include: 1) Environmentally and Economically Sustainable Crop and Livestock Integrated Systems, 2) Animal, Plant and Human Disease Prevention, 3) Agricultural and Food Based Process and Product Innovation, 4) Managing Soil, Air, Water and Biological Resources, 5) Human Health, Nutrition and Food Safety, Disease Prevention, 6) Urban Environment and Small Acreage Agriculture, 7) Youth Education and Development, 8) Individual and Family Well-being, and 9) Community Development.

Specific outputs and outcomes described in the POW represent approximately 60% of the total FTEs invested in Idaho research and Extension activities, as faculty are not expected to plan 100% of their activities out to five years.

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2008	100.5	0.0	71.3	0.0
2009	100.5	0.0	71.3	0.0
2010	100.5	0.0	71.3	0.0
2011	100.5	0.0	71.3	0.0
2012	100.5	0.0	71.3	0.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- Internal University Panel
- Combined External and Internal University Panel
- Expert Peer Review
- Other (administrative review)

2. Brief Explanation

All Extension and research faculty develop annual position descriptions that outline major programs for the year. These position descriptions are subject to annual merit review at a number of levels, beginning with division leaders and department heads and ending with associate deans and deans. Merit and program success of each faculty member is also thoroughly reviewed throughout the tenure and promotion process by a panel of faculty, at years 3, 5, 10, 15, 20, etc. Review panels charged with specific program responsibilities conduct further merit review. These review panels may include commodity interests, other academics, agency personnel and stakeholders.

UI Extension has adopted a “Topic Team” approach to program planning and delivery. Faculty with research appointments are assigned to Topic Teams based upon their area of expertise and signature programs established by CALS. Teams of faculty meet to discuss priorities and agree upon projects for advancement. Topic Team priorities are monitored by College administration. Topic Teams

prepare and submit competitive grant applications for state critical issues funding. Successful applications are those that demonstrate that the project meets a team-identified, peer-reviewed priority, and will result in measurable outcomes for stakeholders. An increasing number of programs are supported through grants and awards made by federal, state, or local agencies, foundations, and businesses. It is particularly true for agencies, and increasingly true for private organizations, that the projects meet high standards for quality, relevance, and impact.

All faculty in CALS or other colleges within the UI holding a research appointment in the IAES, are required to have an active, approved research project that reflects their major research emphasis. Hatch projects are expected to address problems relevant to Idaho's agriculture and it's citizens. Projects should also include a national or regional scope of importance. Hatch project proposals must be reviewed internally by a minimum of two colleagues with expertise in the area of research, the investigator's Department Head and a minimum of two external experts in the area not affiliated with the UI.

IAES research contributing to Multistate projects/programs and approved by CSREES are categorized as research activities of various types as defined by the State Agricultural Experiment Station System. In the Western Region, these multi-state projects must be reviewed by a maximum of four outside peer reviewers in addition to the overall regional multi-function committee appointed by the Western Association of Agricultural Experiment Station Directors (WAAESD). The RCIC reviews the intitial proposal, makes recommendations to the WAAESD and, if approved, transmits the project to CSREES. The RCIC also monitors progress annually.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Critical issues of strategic importance include: individual, family, and community sustainablility in terms of social, economic, and environmental conditions that contribute to high quality of life; improving human health and reducing health care costs, contributing to high quality of life; and wise use and conservation of natural resources and natural resource values, contributing to economic, social, and environmental quality and sustainability.

Planned programs address these issues through multidisciplinary education that is intended to change the behavior of individuals, families, organizations, and communities. Specific topics of education include interpersonal relations, youth development and family development, family financial management, leadership skills and development, human nutrition, fitness, food safety, small business development and management, entrepreneurism, plant and animal production and management, soil and water conservation and protection, volunteer development, natural resources management, land use planning, farm financial management, and many more.

The UI planned programs will also be addressed by an appropriate mix of applied and basic research programs. Research target areas overlap significantly with those described above but will be covered by an array of res earch activities and techniques which include: fundamental studies in molecular genetics, genomics and proteomics, molecular and cell biology; environmental sciences, sustainable agriculture production systems, bioremediation of toxic pollutants, human and animal health and nutrition, food quality and safety, agricultural economics, trade policy and economic and social impact analysis; microbial, insect and weed control; plant, insect, and microbe interactions; crop genetic improvement, physiology, management and production; and food animal and dairy cow physiology, reproduction, and management.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

UI Extension has a proactive process to reach underserved audiences that is outlined in detail in our policies and procedures for civil rights and diversity. As part of that process, input from underserved groups is aggressively pursued; Extension faculty monitor their effectiveness to reach minority and underserved audiences on an ongoing basis; Administration monitors faculty success; and when balanced participation is not achieved, even more aggressive steps are taken to reach underserved audiences.

Approximately 80% of the minority population in Idaho are Hispanic. UI Extension has continued to develop and deliver new programs for Spanish-speaking audiences and has worked to hire Spanish-speaking staff. Approximately 15% of the minority population is Native American. UI Extension employs two faculty housed on reservations through the Extension Indian Reservation Program (EIRP) program. The two Extension offices and faculty serving this program are fully integrated into UI Extension, in order that resources available across the system are equally available on the reservations.

Several of the IAES research programs directly target and influence Hispanic and Native American populations in Idaho. Research reported in this POW, as well as other research conducted by the IAES, investigates and attempts to influence issues affecting health and financial well-being of these two populations. These research topics also integrate with other programs which emphasize studies of rural communities, economics, single-parent households, and infectious diseases basic research and prevention.

3. How will the planned programs describe the expected outcomes and impacts?

Topic Teams have thoroughly considered and identified both performance measures and outcome indicators for their planned programs. These descriptions are included in this POW. Team members will report annually to these measures. Teams have also described evaluation studies. When sufficient data have been collected to indicate that outcomes have occurred, teams will report those outcomes as part of their annual accomplishment reports, as UI Extension Impact Statements, and as other publications and products, as appropriate. Researchers are expected to report their findings in high-quality referred journals, and through participation in discipline-based regional and national conferences. When appropriate, researchers are also expected to report significant advances in development of new intellectual property including plant varieties and other intellectual property that could benefit our stakeholders.

4. How will the planned programs result in improved program effectiveness and/or efficiency?

Through collaboration with other faculty (research and extension) Topic Team members identify common priorities; plan joint activities; partition the workload; and coordinate knowledge, fiscal, and human resources to reduce redundancy and achieve cumulative impacts. The IAES and Extension administrators will closely monitor progress and resource needs of each Topic Team and assign resources according to need, team effectiveness, and potential impacts to our stakeholders.

IV. Stakeholder Input

1. Actions taken to seek stakeholder input that encourages their participation

- Targeted invitation to non-traditional stakeholder individuals
- Survey of the general public
- Survey of traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to traditional stakeholder groups

Brief explanation.

The most effective approach is to involve stakeholders in the planning and delivery of research and Extension programs. To encourage participation by larger numbers of collaborators, we solicit assistance from stakeholder representatives and advocates to help us advertise and promote participation opportunities. While CALS has long included statements of inclusiveness on program announcements, recent mass media campaigns have helped expose large numbers of non-traditional stakeholders to this commitment.

In securing research and Extension stakeholder input, we will encourage participation by both traditional and non-traditional stakeholders by providing venues that are convenient, economical, and efficient. This will be accomplished by making CALS off-campus video conferencing facilities available, as well as increased use other forms of electronic communications. Selection and eventual invitation of targeted individuals to serve on key stakeholder groups will be accomplished in context of securing representation of Idaho's diverse population and stakeholder interests. Examples of such stakeholder groups include the Dean's Advisory Board, Unit Advisory Boards, and UI Extension Citizens' Advisory Groups.

2(A). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Other (Commodity-based research and Extension interactions)
- Use Internal Focus Groups
- Use External Focus Groups
- Use Surveys
- Needs Assessments

Brief explanation.

Specific methods utilized to identify stakeholder individuals and groups:
The Dean’s Advisory Board, comprised of stakeholder representatives from government, industry, and education in Idaho. Members are recruited by an invitation and selection process that encourages broad participation representative of Idaho's population diversity,

including both traditional and non-traditional stakeholders.
The eight CALS academic departments have stakeholder advisory boards. Members are recruited by an invitation and selection process that encourages broad participation representative of Idaho's population diversity, including both traditional and nontraditional stakeholders..
UI Extension has citizen advisory groups in 42 of Idaho's 44 counties which represent a broad mix of public interests from the county perspective.
Idaho's 17 agricultural commodity commissions and organizations are selected by industry representatives with approval by state government officials.
Extension newsletters and other communications are sent to every household in some counties, and everyone is invited to provide input and to participate in programs.
When stakeholder groups can be narrowly defined, UI Extension often collaborates with state and local agencies and organizations whose missions overlap. For example, to reach more seniors, UI Extension has collaborated with AARP and the Agencies on Aging.
IAES researcher and extension faculty conduct several major commodity schools and "field days" annually in the state. These events are highly advertised through numerous media outlets and attended by stakeholders from Idaho and the region.

2(B). A brief statement of the process that will be used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Other (various)
- Meeting with traditional Stakeholder individuals
- Survey of the general public
- Meeting specifically with non-traditional individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of traditional Stakeholder individuals

Brief explanation

Specific methods utilized to collect stakeholder input:
Extension and research faculty, working as Topic Teams, define and describe the stakeholders and target audiences for their various programs; and then design and conduct processes to reach those audiences. In most cases, it is left to the expertise of faculty to determine who stakeholders are for a given program.
Stakeholder input is collected through a multi-level system of advisory committees; through interaction with other professionals and advocates; and through surveys and questionnaires distributed at Extension events and by mail.
The Dean's Advisory Board meets with CALS, IAES, and UI Extension administrators at least four times annually. These meetings are held at various locations around the state to provide the highest level of participation and enthusiasm by participants.
CALS academic department stakeholder advisory boards meet at least once annually. Typically this meeting is held on the main campus in Moscow so that the departmental board members can meet and provide input to the Dean's Advisory Board.
Commodity schools and field days are an opportunity for research and extension faculty to directly interact with commodity commission representatives as well as other growers and stakeholders. The intent is for these activities to serve as a major outreach and technology transfer venue, and to allow a chance for stakeholder feedback to IAES regarding research priorities, directions, and progress.
CALS research and extension programs are annually shared and discussed with representatives from the executive branch of the state government including the Governor's Office and the Dept. of Agriculture, as well as key committees (agriculture and appropriations) and leadership of the Idaho Legislature.

3. A statement of how the input will be considered

- Redirect Extension Programs
- To Identify Emerging Issues
- In the Action Plans
- To Set Priorities
- In the Budget Process
- In the Staff Hiring Process

Brief explanation.

Stakeholder input is used to formulate overall CALS research and extension strategic goals, as well as the goals and directions of individual Topic Teams. After receiving input from stakeholders as described in sections 2.A and 2.B, the appropriate administrative group or team will plan for short-term and long-term objectives and provide resources accordingly. Acquiring input is documented and formally considered by Topic Teams as part of the priority setting and planning processes for programs and must be included as part of applications for critical issues extension grants and other awards available through the State Office. UI Extension has worked to increase the Spanish-language skills of staff, through both training and hiring to build capacity to reach underserved stakeholders.

V. Planned Program Table of Content

V(A). Planned Program (Summary)

1. Name of the Planned Program

4-H Youth Development

2. Brief summary about Planned Program

The 4-H Youth Development Team will work on the following topics:
Expanding Science and Technology - Educators, assistants, and volunteers will use research based methods and materials to increase the knowledge and skills of youth in science and technology.
Healthy Lifestyles - Educators, assistants and volunteers will educate youth about nutrition, health, exercise and health risk behaviors and enhance their decision-making skills to make choices that will lead to healthy lifestyles.
Volunteer Development and Leadership - Educators and assistants will offer training to adult and youth volunteers to enhance their leadership skills and they will provide opportunities for these volunteers to use the learned skills.
Reaching Underserved Audiences - Educators, assistants and volunteers will expand partnerships and increase efforts to provide programs for underserved audiences.
Youth-Adult Partnerships - Educators, assistants, and volunteers will encourage more collaborations to provide opportunities for youth and adults to work in partnership in local communities and statewide.
Strengthen Families and Communities - Educators, assistants and volunteers will use curriculum, learning opportunities and activities to teach skills and provide positive interaction for youth and families.

3. Program existence : New (One year or less)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 724 10% Healthy Lifestyle
- 803 10% Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 80% Youth Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Expanding Science and Technology Skills ProgramsNational Assessment of Educational Progress indicates that only 31% of 4th graders and 39% of 8th graders are proficient in science and technology. Low income youth do not have ready access to technology toincrease their knowledge and skills, therefore they will fall even further behind. Knowledge and aptitude in computerized technology are increasingly critical pre-requisites to functionally participate in today's society as students, adults, and citizens. Moreover, more jobs require much greater use of technology. The U.S. Dept. of Labor predicts that the 10 fastest growing jobs in the next ten years are those in science, engineering, and technology-intensive fields.Healthy Lifestyle ProgramsJuvenile arrest rates in Idaho are above the national average; teen DUI arrests have increased 22% since19958% increase in the number of youth offered, sold or given illegal drugs on school property; Child and teen obesity rates have more than doubled since 1980. More than one third of high school students do not engage in any vigorous physical activity.Volunteer Development and LeadershipVolunteerism and leadership are critical elements of the 4-H program; Trained volunteers enhance programming efforts; Training volunteers enhances their experience and increasesretention.Reaching Underserved AudiencesIncreasing Hispanic population in Idaho; 25% of 4-H age youth are now Hispanic; Native American youth population is 1.4%; 85% live in poverty; 17% of Idaho's youth live in poverty; Deployment of military parent(s) has increasedAdult Partnerships Youth Youth involvement is critical to successful communities; Youth want to be involved in making decisions that affect their lives; Positive youth-adult interactions are community assets.Strengthening Youth and Families4-H offers educational opportunities that teach skills in subject matter, leadership, citizenship, community service learning and teamwork. Idaho 4-H Impact Study proves that 4-H participation positivelyaffects youth and families.

2. Scope of the Program

- In-State Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Desired Outcome: Increased knowledge and skills in science and technologyParticipants will need to learn to use technology to enhance their skills as learners, to help solve problems, and to be competitive in today's world. Research-based curriculum teaches science concepts and engages youth with experiential activities to enhance learning in areas such as physics (Aeronautics), engineering (Robotics), information technologies (GPS/GIS), biology (Junior Master Gardener), general science (Science Discovery), and leavening (foods), etc.Desired Outcome: Increased knowledge and participation in a healthy lifestyleParticipants will need to learn to make choices leading to a healthier lifestyle such as choosing healthier foods and increasing exercise to avoid obesity and decreasing at-risk behaviors (alcohol, tobacco, and drugs).Desired Outcome: Increased leadership skills in 4-H members and adult volunteers.Participants will need to learn skills that will enhance their leadership abilities including presentation skills, speaking skills, writing skills, teaching skills and teamwork skills.Desired Outcome: Increase participation of underserved audiences in 4-H Youth programs.Participants will share cultural diversity, learn new skills and gain more opportunities to increase knowledge, through participation in the 4-H Youth programs.Desired Outcome: Increase the number and the effectiveness of youth adult partnerships.Participants will learn how to form and enhance youth adult partnerships and expand opportunities for these partnerships to work together in the community.Desired Outcome: Strengthen families and communities through positive youth development programsParticipants will increase leadership and citizenship skills as well as increase knowledge and basic skills through hands-on learning and positive youth adult interactions. Topic Team members will deliver trainings, classes, curriculum and learning activities. They will present posters and exhibits, write publications and other media materials and actively market the 4-H Youth Development program. In order to deliver the outputs the Topic Team will need to invest the following resources:
Extension faculty and staff time
Volunteer time
Funds from grants, program participants, and federal, state and county entities
Educational materials

2. Ultimate goal(s) of this Program

Ultimate goals for the 4-H Youth Development Team are:
Youth participating in 4-H Youth Development programs will increase their knowledge of and participation in healthy lifestyle behaviors.
Increase knowledge and benefits of a healthy lifestyle through education and increased activity levels of youth involved in 4-H youth programs
Develop leadership skills in 4-H members and adult volunteers by providing training and opportunities for them to enhance their skills in a wide variety of situations.
Expand 4-H Youth Development programs to better reach underserved and new audiences through expanded partnerships, increased programming efforts and more effective marketing of the program
Increase the number and the effectiveness of youth-adult partnerships by working to provide more opportunities for collaboration in local communities and statewide.
Strengthen families and communities through positive youth development programs at the local level and statewide.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	14.7	0.0	0.0	0.0
2009	14.7	0.0	0.0	0.0
2010	14.7	0.0	0.0	0.0
2011	14.7	0.0	0.0	0.0
2012	14.7	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Project 1: Expanding Science and Technology SkillsExtension Educators, Coordinators and Assistants will offer curriculum, classes and training sessions for volunteers and youth trainings to enhance knowledge and skills in science and technology fields.
Project 2: Healthy LifestylesExtension Educators, Coordinators and Assistants will offer curriculum, classes, training sessions and camps for volunteers and youth to educate participants and encourage them to follow steps to a healthier lifestyle.Project 3: Volunteer Development and LeadershipExtension Educators, Coordinators and Assistants will offer curriculum, classes and training sessions for volunteers and youth to learn and practice leadership skills.Project 4: Reaching Underserved AudiencesExtension Educators, Coordinators, Assistants and Volunteers will work to encourage more participation by under-served youth and adults through collaboration, through teaching classes for these audiences, and by providing training sessions to encourage others to reach out to underserved audiences with youth development programs.Project 5: Youth Adult PartnershipsExtension Educators, Coordinators and Assistants will offer curriculum, classes, training sessions and opportunities for adults and youth to work together to help improve the local communities.Project 6: Strengthening Families and Communities Through Positive Youth Development ProgramsExtension Educators, Coordinators, Assistants and volunteers will offer classes, learning activities, training sessions and curriculum to involve youth and their families in programs that will teach skills and personal development.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• One-on-One Intervention • Group Discussion • Education Class • Workshop • Demonstrations	• Web sites • Newsletters • Billboards • TV Media Programs • Public Service Announcement

3. Description of targeted audience

Expanding Science and Technology Skills
Idaho Youth, ages 5-19
Adult and youth volunteers
School enrichment and after school youth
Teachers and Out-of-school instructors
Healthy Lifestyles
Idaho Youth, ages 5-19
Adult and youth volunteers
School enrichment and after school youth
Volunteer Development and Leadership
Idaho Youth, ages 12-19

4-H /Youth Volunteers
Youth Development Staff
Community Leaders
Reaching Underserved Audiences
Hispanic Youth and Adult volunteers
Native American Youth and adult volunteers
Children of Military Families and adult volunteers
Youth and Adult Partnerships
Idaho Youth, ages 12-19
4-H /Youth Volunteers
Youth Development Staff
Community Leaders
Strengthening Families and Communities
Idaho Youth, ages 5-19
Adult and youth volunteers
Youth Development Staff
Community Leaders
Hispanic Youth and Adult volunteers
Native American Youth and adult volunteers
Children of Military Families and adult volunteers

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	6500	1500	32000	8000
2009	6550	1500	32200	8000
2010	6600	1500	32400	8000
2011	6650	1500	32600	8000
2012	6700	1500	32800	8000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Number of youth in educational classes and workshops.

  2008 : 27000 **2009 :** 27200 **2010 :** 27400 **2011 :** 27600 **2012 :** 27800

- Number of volunteers in educational classes and workshops.

  2008 : 5000 **2009 :** 5025 **2010 :** 5050 **2011 :** 5075 **2012 :** 5100

- Number of opportunities to market 4-H Youth Development.

  2008 : 155 **2009 :** 155 **2010 :** 155 **2011 :** 155 **2012 :** 155

- Number of educational classes, workshops taught.

  2008 : 1070 **2009 :** 1070 **2010 :** 1070 **2011 :** 1070 **2012 :** 1070

- Number of publications, newsletters and columns.

  2008 : 330 **2009 :** 330 **2010 :** 330 **2011 :** 330 **2012 :** 330

- Number of 4-H clubs or groups.

  2008 : 2090 **2009 :** 2090 **2010 :** 2090 **2011 :** 2090 **2012 :** 2090

- Number of youth attending statewide 4-H events.

  2008 : 450 **2009 :** 450 **2010 :** 450 **2011 :** 450 **2012 :** 450

- Number of volunteers attending state, regional events.

  2008 : 285 **2009 :** 285 **2010 :** 285 **2011 :** 285 **2012 :** 285

- Number of TV/Radio appearances.

  2008 : 10 **2009 :** 10 **2010 :** 10 **2011 :** 10 **2012 :** 10

- Number of radio stations airing 4-H PSA's.

  2008 : 20 **2009 :** 20 **2010 :** 20 **2011 :** 20 **2012 :** 20

- Number of hits on the web site each year.

  2008 : 20000 **2009 :** 20000 **2010 :** 20000 **2011 :** 20000 **2012 :** 20000

V(I). State Defined Outcome

1. Outcome Target

O: Youth will expand science and technology skills through participation in 4-H Youth Development Programs.I: Number of youth participating in 4-H Youth Development programs designed to expand science and technology skills.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 2000 **2009 :** 2200 **2010 :** 2400 **2011 :** 2600 **2012 :** 2800

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

1. Outcome Target

O: Youth participating in 4-H Youth Development programs will increase their knowledge of healthy lifestyle behaviors.I: Number of youth who increase their knowledge of healthy behaviors.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
8000	8200	8400	8600	8800

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 806 - Youth Development

1. Outcome Target

O: Youth participating in 4-H Youth Development programs will increase their participation in healthy lifestyle behaviors.I: Number of youth who increase their adoption of healthy activities.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4500	4700	4900	5000	5100

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 806 - Youth Development

1. Outcome Target

O: More youth and adult volunteers will be available to lead 4-H Youth Development programs.I: Total number of volunteers receiving training.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
5000	5100	5200	5300	5400

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

1. Outcome Target

O: More youth and adult volunteers will be available to lead 4-H Youth Development programs.I: Number of new volunteers certified.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
400	450	500	550	600

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

1. Outcome Target

O: Underserved youth will learn life skills through 4-H Youth Development.I: Number of underserved youth participating in 4-H

Youth Development.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
8000	8200	8400	8600	8800

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

1. Outcome Target

O: Underserved youth will learn life skills through 4-H Youth Development.I: Number of programs designed and marketed specifically for underserved youth.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
150	160	170	180	190

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

O: A greater number of organizations will benefit from effective youth-adult partnerships.I: Number of committees, councils and boards with youth and adults serving together.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
80	85	90	95	100

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

1. Outcome Target

O: Youth and adults will learn life skills through participation in 4-H Youth Development programs.I: Number of youth and adults participating in 4-H Youth Development programs.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
32000	32200	32400	32600	628000

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Appropriations changes
- Competing Public priorities
- Competing Programatic Challenges
- Government Regulations
- Public Policy changes

Description

The underlying assumption for all work is a continuation of a viable 4-H Youth Development program in Idaho, and that extension and research programming by 4-H Youth Development team.will adapt to meet problems and challenges as they arise.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Description

Participation data in 4-H/Youth Development programs and events is reported through the 4-H Plus and IDEAS databases Numbers of opportunities for youth to gain education and skills in science and technology, healthy lifestyle behaviors, youth-adult partnerships and other life skills will be gathered through these mechanisms. These same databases will gather information on the numbers of opportunities for under-served audiences. Participation data by youth including underserved youth and volunteers are also reported to these databases. Participation information is reported by numbers of participants, age, gender and race. More data will be gathered through a reporting form developed by this group that addresses the specific indicators in this Plan of Work. This data will be reported against Indicators 1,3,7,8,11,12,13,15,16,17,18,and 19.A Volunteer Participation Study is being done to determine how training affects volunteer effectiveness and retention. This study will also determine increases in education and skills through program participation and training. This study will gather information to support Indicators 2, 6, 9,10 and 14. Indicators 4, 5, 9 and 10 will require data gathering through program evaluation of participants in areas teaching science and technology and healthy lifestyles. Some programs already have extensive follow-up evaluations. The team will work to provide ways for program leaders to evaluate knowledge gained and life skills achieved.

2. Data Collection Methods

- Mail
- Telephone
- On-Site
- Whole population
- Structured
- Tests

Description

Evaluation tools will be designed that can be used with volunteers, youth, parents, and community partners. Key questions related to the specific outcomes outlined in the 6-year plan will be developed. These questions can be used in any 4-H program regardless of location and target audience. When each individual 4-H program is planned, the program manager will select the questions to include in any on-site evaluation. The results ofthese on-site evaluations will be sent to the State 4-H office to be downloaded into a single program evaluation data base. Survey tools will be web-based or printed to allow for the greatest level of participation. A firm schedule will be set for data collection. The data collectors will receive the training and tools they need for collecting data.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Beef

2. Brief summary about Planned Program

Idaho has a broad spectrum of beef cattle producers and variation in beef cattle production environments. Idaho's beef industry is comprised of several components including cow-calf, stocker (backgrounder), feedlot, and packer. The beef industry ranks in the top three of Idaho's agricultural industries and contributes from $600 million to $1.2 billion, depending on fluctuating market conditions, annually to Idaho's state economy. Efficient and profitable production of beef cattle at the cow-calf, stocker, and feedlot levels is influenced by numerous and varied production, financial, environmental, and marketing factors. Studies have shown that a large percentage of beef producers have not adopted a wide variety of proven technologies and that production efficiency in numerous operations could be improved. The industry is changing at a rapid pace. Beef cattle producers are faced with a variety of issues that directly impact the profitability of their operations.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 301 20% Reproductive Performance of Animals
- 302 20% Nutrient Utilization in Animals
- 305 10% Animal Physiological Processes
- 306 10% Environmental Stress in Animals
- 307 30% Animal Management Systems
- 308 10% Improved Animal Products (Before Harvest)

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Idaho is home to a strong, stable, and profitable beef industry. Statewide, approximately 57% of Idaho beef operations have 50 head or fewer, however, about 8% have more than 500 head (which account for 68% of the total beef cattle inventory in Idaho). Most beef cattle operations are relatively small, family-owned enterprises. The majority of beef cows are located on operations in the southern part of the state. In Idaho, where more than two-thirds of all land is federally owned, the vast majority of beef cattle spend at least part of the year grazing on public land.

Research and extension priorities will be to generate methods for improved animal management and the detection, control and treatment of infectious diseases of beef animals in the Northwest and United States. Additional priorities include developing market alternatives and improve product quality and consistency to satisfy the consumer's demands. Finally, we will investigate mechanisms to decrease the loss of natural resources and use of agricultural inputs (e.g. chemicals) by Idaho food producers.

2. Scope of the Program

- Multistate Integrated Research and Extension
- In-State Research
- Multistate Research
- Integrated Research and Extension
- In-State Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Idaho's dairy industry continues to grow. As a result, in many parts of the state, beef producers are competing with dairy producers to purchase feedstuffs for their cattle. Challenges by environmental advocacy groups over the use of public lands for grazing are becoming more common. Drought conditions have brought water rights and usage to the forefront. In some areas, water usage for livestock may be challenged. Beef producers are likely to face opposition to their use of public land grazing and water resources. In recent years, beef producers been able to market their cattle at relatively high prices. In some cases producers have seen record highs. Now that the price cycle has reached its high point and has started its descent, producers will need to work toward greater efficiency while producing products that are desired in the marketplace.

2. Ultimate goal(s) of this Program

The ultimate goal of the beef team is to deliver essential information to beef cattle producers regarding the development and maintenance of beef production systems that are economically viable and environmentally sustainable. It is also expected that animal health, performance, quality, and consistency will be improved and ultimately benefit both producers and consumers.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	3.2	0.0	3.5	0.0
2009	3.2	0.0	3.5	0.0
2010	3.2	0.0	3.5	0.0
2011	3.2	0.0	3.5	0.0
2012	3.2	0.0	3.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Planned activities include beef schools, demonstration/applied research trails, Extension publications, popular press articles, tours, field days, faculty training sessions, web sites, CD-ROM based learning modules, beef quality assurance training/certification sessions, office visits, and farm/ranch visits. The focus of these efforts will depend on stakeholder input, questions, and needs. When appropriate, information generated by the beef team will be presented in refereed scientific journals and at professional meetings. We will train graduate and undergraduate students in research methodologies related to beef research.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Education Class • Workshop • Group Discussion • Demonstrations • One-on-One Intervention	• Web sites • Public Service Announcement • TV Media Programs • Newsletters

3. Description of targeted audience

The main target audience is beef cattle producers through direct interaction and through interactions with the Idaho Beef Council

and Idaho Cattlemen's Association. Producers can participate with the beef team by serving on planning committees, attending educational events, meeting one-on-one with team members, reading Extension and research publications, seeking information on websites and through other channels, and cooperating with demonstration/applied research projects.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	1600	600	75	100
2009	1750	600	100	100
2010	1600	600	100	100
2011	1750	600	100	100
2012	1750	600	100	100

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	4
2009	2	4
2010	2	4
2011	2	4
2012	2	4

V(H). State Defined Outputs

1. Output Target

- Beef schools.

  2008 :10 **2009 :**10 **2010 :** 10 **2011 :**10 **2012 :**10

- Beef Quality Assurance (BQA) workshops.

  2008 :5 **2009 :**8 **2010 :** 8 **2011 :**4 **2012 :**4

- Field days.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Demonstrations/Applied research projects.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Tours.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Extension publications.

2008 :4 **2009 :**4 **2010 :** 4 **2011 :**4 **2012 :**4

- Popular press articles.

2008 :10 **2009 :**10 **2010 :** 10 **2011 :**10 **2012 :**10

- Newsletters.

2008 :8 **2009 :**8 **2010 :** 8 **2011 :**8 **2012 :**8

- Scientific journal articles

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Abstracts.

2008 :3 **2009 :**3 **2010 :** 3 **2011 :**3 **2012 :**3

V(I). State Defined Outcome

1. Outcome Target

O: Producers apply new, accepted, or recommended production practices. I: Percent of participants indicating adoption of recommended practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :50 **2009 :** 50 **2010 :** 50 **2011 :**50 **2012 :** 50

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

1. Outcome Target

O: Producers aquire knowledge and understanding of new, approved, or recommended beef production practices.I: Percent of knowledge increase demonstrated by participants (pre- post-test results).

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :25 **2009 :** 25 **2010 :** 25 **2011 :**25 **2012 :** 25

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

1. Outcome Target

O: Producers are aware of new, accepted, or recommended practices related to BQA, NAIS, and other new and emerging technologies and issues.I: Number of participants at educational events.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
400	400	400	225	200

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
7	7	7	7	0

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

1. Outcome Target

O: Producers possess skills and knowledge about BQA I: Number of BQA certificates awarded

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	150	100	100	150

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Competing Programatic Challenges
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)
- Public Policy changes
- Appropriations changes
- Economy
- Government Regulations

Description

Numerous factors may affect the success of this educational programming effort. Changes in the resources (faculty, funding, etc.) may limit the team's ability to address issues and reach audiences. As Idaho's population shifts from rural to urban, a general lack of understanding and knowledge about agriculture is threatening the beef industry. This shift may result in a decrease in funding for agricultural research and Extension efforts. The industry is constantly being challenged by environmental advocacy groups. Changes in county, state, and federal regulations have not consistently benefited producers. Major weather changes, such as drought, may change the priority of issues addressed by the team, and may affect producers' production capabilities. Markets for beef and beef products constantly change. Adoption of new technologies and practices may be affected by producer apathy, a general resistance to change, and producers' limited funds for investment.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- After Only (post program)
- During (during program)
- Comparison between locales where the program operates and sites without program intervention

Description

The effectiveness of the beef team will be evaluated by program attendance records, program evaluations, amount of information accessed via web sites, and number of requests for information. Pre- and post-tests conducted at programs will provide information on the amount of knowledge gained by participants.

2. Data Collection Methods

- Observation
- Journals
- Unstructured
- On-Site
- Mail
- Other (Faculty Annual Performance Repor)
- Case Study

Description

Survey data will be used to determine the number of beef producers using information provided by the beef team and determine the number of beef producers adopting new technologies and production practices. Anecdotal information, collected at meetings, office visits, and farm/ranch visits, will also be used to assess the use of information and the adoption of technologies and practices.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Cereals

2. Brief summary about Planned Program

The cereal crops, wheat, barley, corn and oats are grown in Idaho on about two million acres annually, nearly half the cropped acres in Idaho, and harvested grain was valued at over $570 million in 2004. Cereal crops are an important component in practically all Idaho crop rotation systems and are considered critical for the productivity and economic viability of the systems and agriculture in Idaho. Objective science based information pertinent to these small grain enterprises is critical for their sustainability. Topic areas for cereal team research and extension programming to provide this vital technology include: 1) development and adoption of improved varieties; 2) using economical, effective, and environmentally friendly crop protection practices; 3) applying beneficial cultural and fertilization crop management practices; and 4) integrating cereal production practices into a productive cropping system.Effective and planned research and extension efforts in these program areas will positively influence cereal productivity, farm economic viability, protection or enhancement of the environment, and optimization of grower returns for cereal production in Idaho. Information and technology about cereal production in Idaho must be based on objective scientific information that is highly credible and widely available for implementation by Idaho growers and affiliated agricultural businesses, government support agencies, consumers, and others in neighboring regions and beyond.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 201 20% Plant Genome, Genetics, and Genetic Mechanisms
- 202 20% Plant Genetic Resources
- 205 20% Plant Management Systems
- 211 20% Insects, Mites, and Other Arthropods Affecting Plants
- 212 10% Pathogens and Nematodes Affecting Plants
- 502 10% New and Improved Food Products

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Producers in Idaho grow cereal crops, wheat, barley, oat, and corn for grain, on about 2 million acres annually. This acreage is over 45% of the 4.4 million acres of field crops grown in Idaho. Growers need unbiased, science derived information and technology to effectively manage their cereal crops for optimum productivity, economic return, protection of the environment, and sustainability. Growers are faced with management decisions that will greatly influence the success of their enterprises that include cereal crops. Decisions include: variety selection, pest management, crop management practices, and integration into their overall cropping systems. There are many specific issues within each of these decision areas that the topic team will be addressing, and most of these issues have short-, medium-, and long-term implications and problems. The issues presented are current and identified by stakeholders.Development and adoption of improved varieties: Growers need varieties that are productive, have good to superior end use quality, are well adapted, resist diseases, insects, and other pests, fit in weed control regimes, work in rotation with other crops, and can be managed easily and effectively. These issues are being addressed by effective wheat and barley breeding programs and that produce superior varieties for crop performance, some with herbicide resistance, and emphasize end use quality; a comprehensive statewide variety testing program that delivers variety choice information to growers; a weed and pest management programs that addresses pesticide resistance, effectiveness and crop systems interactions; and variety specific management and systems evaluations.Using economical, effective, and environmentally friendly crop protection practices: Crop protection allows varieties to express their yield potential. Critical issues in crop protection include: pesticide resistance, pesticide residue, herbicide efficacy and registration, emerging weed problems (especially in direct seed systems), stripe rust control, root diseases, effective seed treatments, aphids (also as vectors for viruses), Hessian fly, cereal leaf beetle, nematodes, and other pests.Applying beneficial cultural and fertilization crop management practices: Management practices

include: fertilizer application rates, methods, and timing; soil testing; seeding rates, methods, and timing; tillage and seedbed preparation; irrigation and water management, and biological seed treatments.Integrating cereal production practices into a productive cropping system: Cereal production must fit with other crops and this cropping system is important relative to: field selection, crop rotation sequence and rotational crops, and tillage systems.
Plant Germplasm, Genetic Resources and Conservation, Plant Health and Well Being:
UI researchers focus on identifying and manipulating plant germplasm to improve crop plant performance and the production of seed and other plant products. It is also their goal to develop economical, biological and socially compatible crop management strategies that increase production efficiency. Research in this area is conducted in close cooperation with input from relevant commodity groups including the Idaho Wheat Commission, Idaho Barley Commission, and others. This research is also planned and conducted with the cooperation of university researchers in Oregon and Washington as well as ARS researchers in the three- state region in accordance with our long-standing Tri-State Agreement.

Crop Production Systems:
This research emphasis is to develop marketing alternatives, and product quality and consistency, to meet the consumer's demands. It is also our goal to decrease the loss of natural resources (e.g. soil and water) and agricultural inputs (e.g. chemicals) by Idaho food producers.

2. Scope of the Program

- In-State Extension
- Integrated Research and Extension
- Multistate Extension
- Multistate Research
- Multistate Integrated Research and Extension
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Maintenance of participant numbers in the program at all levels - research, extension specialists, support scientists, county extension educatorsContinued viability of funding sources and supporting structure - local, state, nationalContinuation of cereal crops as an agriculture college priority 'signature program'Cereal growers relying on public sector as viable sources of information and technology for crop productionKnowledge and education will be important in cereal commodity viabilityLearners achieve incremental increases in knowledge and adapt new practices and technologies over time and will build capital and human resources while maintaining and enhancing the natural resource base.Pests and economics will changeNew markets will open upAdoption of new technology will change consumer preferencesThe need for value added products and niche markets will continue and should increase

2. Ultimate goal(s) of this Program

Producers in Idaho who grow cereal crops, wheat, barley, oat, and corn for grain, will be provided with unbiased, science-derived information and technology to effectively manage their cereal crops for optimum productivity, economic return, protection of the environment, and sustainability. Technology creation and delivery must address issues that are current and identified by stakeholders, but should be important for the next six years.Development and adoption of improved varieties through effective wheat and barley breeding programs and that produce superior varieties for crop performance; a comprehensive statewide variety testing program that delivers variety choice information to growers; a weed and pest management program that addresses pesticide resistance, effectiveness and crop systems interactions; and variety specific management and systems evaluations.Growers using economical, effective, and environmentally friendly crop protection practices that allow varieties to express all their yield potential. The adoption and use of beneficial cultural and fertilization crop management practices to increase productivity and economic return.The effective integration of cereal production practices into a productive cropping system to optimize whole farm productivity and economic return while protecting the environment and other stakeholder's benefits.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	4.6	0.0	4.9	0.0
2009	4.6	0.0	4.9	0.0
2010	4.6	0.0	4.9	0.0
2011	4.6	0.0	4.9	0.0
2012	4.6	0.0	4.9	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Breeding, testing, evaluating wheat and barley varieties throughout Idaho that will evaluate agronomic performance, end-use quality, adaptability to an areas or types of production, suitability for specialty markets, and production of seed for moving the varieties into commercial production.Conducting cereal schools to interact with growers and provide technology transfer for new varieties, pest management practices and problems, management decisions, and integration of cereals in cropping systems.Conduct field tours and field days to transfer technology as in cereal schools.Meet with advisory committees, commodity commissions, processors, ag-support industries for feedback and to inform them of work in cereal production in Idaho.Conduct off campus credit and continuing ed classes, stakeholder seminars, and applicator training/testing for education and technology transfer about cereals.Write and publish newsletters, Extension publications, progress reports, scientific publications, and general media articles.Conduct research into cereal production problems as identified in the plan of work.Interact with other professionals at meetings to transfer knowledge, form alliances, and implement projects.Document and report progress and accomplishments.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Group Discussion • Demonstrations • Workshop • Education Class • One-on-One Intervention	• Web sites • Other 1 (Publications) • Newsletters • TV Media Programs • Public Service Announcement

3. Description of targeted audience

Cereal growers in Idaho - will be provided with technology to enhance cereal production and profitability and provide feedback and suggestions of needs and areas of concern for profitable cereal production. They will also provide resources for the project through direct use of facilities, and through checkoff contributions to commodity commissions.Agribusiness and support workers - will provide resources for technology development and delivery, be targets for information delivery, provide feedback and suggestions for directions of the program.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	2000	2000	20	20
2009	2000	2000	20	20
2010	2000	2000	20	20
2011	2000	2000	20	20
2012	2000	2000	20	20

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	1	10
2009	1	10
2010	1	10
2011	1	10
2012	1	10

V(H). State Defined Outputs

1. Output Target

- Idaho Cereal Schools.

  2008 : 5 **2009 :** 5 **2010 :** 5 **2011 :** 5 **2012 :** 5

- Release and adoption of new cereal varieties.

  2008 : 2 **2009 :** 2 **2010 :** 2 **2011 :** 2 **2012 :** 2

- Publication of CIS, Progress reports, PNW, etc.

  2008 : 10 **2009 :** 10 **2010 :** 10 **2011 :** 10 **2012 :** 10

- Develop pest control technology - project/experiments.

  2008 : 20 **2009 :** 20 **2010 :** 20 **2011 :** 20 **2012 :** 20

- Research on management systems - projects/experiments.

  2008 : 30 **2009 :** 30 **2010 :** 30 **2011 :** 30 **2012 :** 30

- Refereed publications

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

O: Producers gain knowledge about improved cereals management.I: Number of participants attending cereal schools, field days, etc..

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :550 **2009 :** 550 **2010 :** 550 **2011 :**550 **2012 :** 550

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 502 - New and Improved Food Products

1. Outcome Target

O: Producers are aware of cereal resource publications.I: Number of cereal extension publications distributed.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :600 **2009 :** 600 **2010 :** 600 **2011 :**600 **2012 :** 600

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 502 - New and Improved Food Products

1. Outcome Target

O: Producers adopt new cereal varieties.I: Increase in number of acres of new varieties (released within 5 years; greater than previously grown).

2. Outcome Type : Change in Action Outcome Measure

2008 :5000 **2009 :** 5000 **2010 :** 5000 **2011 :**5000 **2012 :** 5000

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources

1. Outcome Target

O: Adoption of new crop production methods.I: Number of growers who report adoption through surveys at educational events and meetings.

2. Outcome Type : Change in Action Outcome Measure

2008 :200 **2009 :** 200 **2010 :** 200 **2011 :**200 **2012 :** 200

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources

- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :2 **2009 :** 2 **2010 :** 2 **2011 :**2 **2012 :** 0

3. Associated Knowledge Area(s)

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 502 - New and Improved Food Products

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations
- Public Policy changes
- Appropriations changes
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Competing Programatic Challenges

Description

The underlying assumption for all work is a continuation of a viable cereal crop industry in Idaho, and that similar problems and challenges will be extant for cereal crop production as are currently being addressed by Extension and research programming by the cereal team.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Time series (multiple points before and after program)
- After Only (post program)
- Retrospective (post program)

Description

Survey of participants at cereal school, and possibly other education events, about use of information and adoption of technology from previous educational events. This survey should: evaluate learning, evaluate use and adoption of previously learned material, and evaluate motivation to adopt recently learned material.Follow the numbers, use, or distribution of: websites, printed educational materials, new varieties, attendance patterns at educational events, variety releases, and crop management research trials.Review published variety use in Idaho to determine acreage of new varieties.

2. Data Collection Methods

- Other (Performance Evaluations)
- On-Site
- Observation

Description
Survey participants at cereal school, and possibly at other educations events; Enumerate distribution of written educational materials; Quantify hits on educational websites; Quantify acreage of varieties for adoption of new varieties; Enumerate participants at educational events; Track acreage of crop management trials in Idaho; Enumerate cereal varieties released in Idaho

V(A). Planned Program (Summary)

1. Name of the Planned Program

Civil Society

2. Brief summary about Planned Program

The Civil Society Topic team works to support communities dealing with issues of human rights and diversity. Current projects include Idaho's Journey for Diversity and Human Rights, Manners Mishaps, and short workshops as needed.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 805 100% Community Institutions, Health, and Social Services

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Recent census figures show that Hispanic representation in the state has grown to nearly 10% of the population in Idaho. Though smaller in numbers, Native American, African American, and Asian families also play a key role in Idaho community life. All of these trends mean that Idahoans experience increasing diversity at work, school, and in our neighborhoods.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Through their well-established community base and research-based educational programming, UI Extension is uniquely positioned to help Idaho's communities develop welcoming environments for all of their residents.

2. Ultimate goal(s) of this Program

The Civil Society topic team has the long term goal of communities that are welcoming places to all residents, families that prepare their children well for the global future they'll experience, and individuals that interact freely with others of various backgrounds of race, income, religion, ethnicity, political belief, age, etc.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	0.8	0.0	0.0	0.0
2009	0.8	0.0	0.0	0.0
2010	0.8	0.0	0.0	0.0
2011	0.8	0.0	0.0	0.0
2012	0.8	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Idaho's Journey for Diversity and Human Rights: Develop and offer a tour at least once a year over the next 6 years.Manners Mishaps: Offer the workshop to youth at least once a year over the next 6 years.Diversity workshops: Offer at least one diversity workshop per year to meet community needs.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Education Class • Workshop • Group Discussion	• Newsletters • Web sites • TV Media Programs

3. Description of targeted audience

Target audience is UI staff and volunteers, youth, educators, business people, community members and leaders, social service providers, state and local agencies, etc. Audience participates by attending the workshops.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	75	50	60	25
2009	75	50	60	25
2010	75	50	60	25
2011	75	50	60	25
2012	75	75	60	40

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Idaho's Journey for Diversity and Human Rights.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Manners Mishaps.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Diversity workshops.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

O: People are aware that knowledge will help address diversity/inclusiveness issuesI: Number of Civil Society program participants

2. Outcome Type : Change in Condition Outcome Measure

2008 :50 **2009 :** 50 **2010 :** 50 **2011 :**50 **2012 :** 50

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

1. Outcome Target

O: Participants change in knowledge, attitude and behavior related to diversity/inclusivenessI: Surveys developed for each program

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :40 **2009 :** 40 **2010 :** 40 **2011 :**40 **2012 :** 40

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Programatic Challenges
- Economy
- Appropriations changes
- Competing Public priorities

Description

Programming on diversity and civil behavior is developed in the context of population changes and the challenges they bring to Idaho communities. Civil society topic team programming will be responsive to these issues as they evolve for the state.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Description

Idaho's Journey and Manner's Mishaps have well-established measures of program impact that will be used. Surveys will be developed specific to the diversity workshops conducted. Each year one of the projects will be selected for assessment of medium term impact, including changes 6 months after the program in attitude, motivation and practice. Every 3 years we will select a program for long term follow-up, consisting of a survey of community leaders and partner organizations about the impact of the programs.

2. Data Collection Methods

- Mail
- On-Site
- Telephone
- Sampling

Description

Surveys, phone surveys, internet surveys.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Commercial and Consumer Horticulture

2. Brief summary about Planned Program

The Commercial and Consumer Horticulture Team is charged with duties involving horticultural education and associated applied research. The target audiences are consumers, groundkeepers, and employees of green industry companies whose business is to supply consumers with horticultural products. To accomplish its goals, the team employs programming in three major areas, Master Gardener education, consumer horticulture education, and green industry education. Master Gardeners are trained volunteers that assist county faculty with public education by answering gardening and landscaping questions, assisting with public horticultural projects, and organizing informational workshops and conferences. Master Gardeners must complete a rigorous course of basic horticultural training that includes topics related to soils, plant growth, fertilization, irrigation, pest control, plant materials, etc. Team efforts associated with Master Gardeners include development of effective instructional tools for this training. A comprehensive and effective Master Gardener Handbook has been developed and is continually being reviewed and revised. Horticultural specialists and county faculty are working to develop and share PowerPoint presentations, demonstrations, projects, handouts and other resources. A new system of instruction is being tested involving statewide presentation via compressed video, thereby providing access to specialists whose duties do not allow statewide travel. Retention of trained Master Gardeners requires continuing education. Team members involved with Advanced Master Gardener instruction provide hands-on workshops and demonstrations on topics such as xeriscaping, insect diagnosis, weed identification, cactus propagation and culture, tree identification and care, pruning demonstrations, integrated pest management practices, and plant problem diagnosis. Consumer horticulture education is a team program designed to reach homeowners with effective gardening and landscaping information. One major new emphasis for distribution of information is the construction and publication of a comprehensive web site that will provide informational resources for all aspects of gardening in Idaho. Additional information is provided through bulletins and presentations at county and regionally based workshops, conferences, garden clubs, church group meetings, schools, and businesses. Extension educators and specialists supply information to the public through newsletters, weekly columns in newspapers (including the ever-popular HomeWise column), and articles in the popular press. Green industry education is designed mainly to assist company managers with training of employees. This program consists of clinics and workshops, often held on-site at business locations throughout the state. Topics include aspects of nursery production, plant material identification, pest control, diagnosis of plant problems, and marketing techniques. A web site is maintained by the team specifically to serve the green industry by providing information about cultural management of nursery stock, current research on propagation and production, market trends, etc.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 15% Soil, Plant, Water, Nutrient Relationships
- 203 10% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 10% Plant Product Quality and Utility (Preharvest)
- 205 35% Plant Management Systems
- 216 20% Integrated Pest Management Systems
- 805 10% Community Institutions, Health, and Social Services

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Idaho's citizens face complex challenges in terms of designing, establishing, and maintaining attractive sustainable home and community landscapes. Idaho's population has grown 29% since 1990, to approximately 1.3 million people. In 1990, 34% of Idahoans lived in urban settings. This figure is now 66%, which translates an urban population increase of more than 510,000 people. These changes have led to a huge increase in the amount of land used for landscaped yards, parks, golf courses, and

greenbelts. Most public areas and home landscapes are intensively managed; consuming disproportional amounts of limited water supplies and generating fertilizer and pesticide contaminants that enter the environment. Sustainable landscape planning, development and management has the potential to optimize aesthetic appeal while conserving water, minimizing pest damage and limiting negative environmental impacts. However, proper application of principles of sustainability will require appropriate plant materials and knowledge concerning horticultural practices and products. All information must be locally applicable. Associated with the increase in land area dedicated to landscaping is growth of the “green industries,” involved in the production and sale of plants and products for use by consumers. In 2003, the value of gross sales for nursery and greenhouse operations was over $71 million, up from $38 million in 1996. Most green industry companies employ seasonal or inexperienced people in positions that require basic knowledge of plant care and sustainable landscape principles. Educational opportunities for green industry professionals are limited and companies benefit heavily from university sponsored programs.Specific issues related to the need for horticultural education in Idaho include:Adequate training tools for beginning and advanced Master Gardener programming.Master Gardener retention.Need for education among green industry professions on topics related to propagation and management of nursery stock, including native plants.Changing ideas of information flow and the need to utilize electronic resources.Need for additional training of existing county faculty in horticultural topics.Lack of statewide continuity in horticultural programming and education.Loss of pest control options and chemicals due to environmenatal regulation.Changes in state demographics that will bring demand for more horticultural information.Need to devise a statewide standard curriculum for Master Gardener training.Urban evironmental issues and the need to adopt sustainable horticulture practices.Limited University of Idaho resources to meet outreach needs, among which is a need for additional horticulturally trained county faculty.Lack of availability to the nursery trade of adapted tree and fruit varieties, low maintenance landscape plants, or native plant materials.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The desire of the Commercial and Consumer Horticulture Team is to provide effective education to homeowners and green space managers that will encourage and allow them to institute appropriate and sustainable landscaping and gardening practices. The assumption is that an educated public will adopt practices that make better use of natural resources, have less impact on the environment, be more attractive and utilitarian, and provide greater variety and interest. In order to reach this objective, the team will require science-based information, modern educational materials and tools, and sufficient human resources to teach and distribute information. In most cases, the required information is available from various groups and institutions. Wherein it is not, short-term applied research projects will be needed. Wherein the information is available, it will need to be compiled into a useable form for teaching and/or distribution in a public forum. In many cases, information needs to be adapted to web applications to take advantage of new electronic tools.In Idaho, the greatest deficiency for effective consumer education is a lack of sufficient human resources to take advantage of potential contact points. There are two groups that can help county faculty alleviate this deficiency. One is trained volunteers, thus the adoption of the Master Gardener program. The other is green industry professionals who actively educate consumers concerning horticultural principles in the process of selling plants and products.Therefore, if consumer education is to be accomplished, it is critical to train and retain active Master Gardeners, deliver accurate information to green industry professionals, and to directly reach consumers through available media resources.There are many benefits to having educated consumers. They will be more likely to make wise decisions that will lead to environmentally friendly landscapes and community green spaces. They will likely adopt landscape and garden design principles that will conserve resources, especially water. They will have sufficient knowledge to spawn creativity that will help overcome landscape monotony and ultimately make Idaho's communities more attractive and interesting places to live. Educated consumers will also be more likely to invest time, money, and energy into creating and improving public green spaces that will add quality and culture to the lives of Idaho's citizens.

2. Ultimate goal(s) of this Program

The ultimate goal for the Commercial and Consumer Horticulture team is to provide knowledge to consumers and green space managers that will allow them to design, install, and maintain attractive, sustainable landscapes and gardens, thereby improving the quality of life in Idaho.To better define the global goal, established secondary goals include:Provide ongoing training of county

faculty in topics related to urban horticulture.Train and retain active and effective Master Gardeners to assist county level education efforts and increase manpower for consumer education.Provide effective statewide consumer horticulture education through electronic and traditional media, workshops and conferences, and one-on-one contact.Provide effective green industry training using a format of clinics and workshops held in opportune times and places, thereby making the green industry more effective at serving the needs of consumers.Complete limited practical research on topics that relate to and support the above educational goals.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	6.4	0.0	1.2	0.0
2009	6.4	0.0	1.2	0.0
2010	6.4	0.0	1.2	0.0
2011	6.4	0.0	1.2	0.0
2012	6.4	0.0	1.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Master Gardener Education: Beginning Master Gardener training classes will be held during each of the six years encompassed by this plan. In 2006, courses will be offered by county faculty in eighteen of Idaho's 44 counties. This includes the counties with the highest population densities. Cooperative arrangements expand training opportunities into counties adjacent to those offering courses. However, access in some counties is limited. Each course will involve 12 or more sessions, each lasting up to 3 hours and will cover basic gardening and landscaping principles. Printed curriculum for each course will consist of the Master Gardener Handbook. Visual aides, demonstrations, and projects will be utilized as deemed appropriate. Advanced Master gardening training is scheduled for each of the six years covered by this plan in the following counties: Ada, Bonner, Cassia, and Latah. An Advanced Master Gardener program will be added in Bonneville County in 2006 or 2007. Curriculum will consist of intensive, hands-on workshops in topic areas of local interest, including pest identification, pruning practices, water conservation gardening, plant problem diagnosis, tree identification, and integrated pest management practices. Tours will be scheduled to visit educational sites around the state. Improvement of Master Gardener curriculum and teaching materials will be a major goal over this six year period. Specialists and county faculty will develop, publish, and share teaching modules on topics pertinent to Master Gardener training. Beginning in 2007 the Master Gardener Handbook will be reviewed and revised.Consumer Horticulture Education: A major objective within the scope of consumer education will be the completion and publication of the "Idaho Landscapes and Gardens" web site during the summer of 2006. This will provide citizen access to a wide range of horticultural topics of interest to the homeowner. Throughout the six-year period, other educational opportunities will be created or used. Workshops and conferences such as the Bonneville County "Thaw and Awe" program will be offered statewide. Field days will be held at research and demonstration sites. Newspaper columns, such as the "HomeWise" series and popular press articles will be used to provide information to the public on topics of seasonal interest. UI bulletins and Current Information Series will be published and distributed to provide technical information on important topics. Green Industry Education: During each of the six years of this plan, UI faculty will participate in and contribute to the annual Horticulture Expo, a premier training event for Idaho's green industry employees. In cooperation with stakeholder companies and the Idaho Department of Agriculture, training workshops will be held at various places around the state. These will be geared to an advanced audience and will provide information on nursery management techniques, pesticide and fertilizer use and recommendations, plant establishment and maintenance principles, and other topics that will ultimately make green industries more profitable and create better service for consumers.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Demonstrations • One-on-One Intervention • Workshop • Education Class • Group Discussion	• Web sites • TV Media Programs • Public Service Announcement • Newsletters

3. Description of targeted audience

Master Gardener Education: The target audience includes members of the public with a high level of interest in horticulture and time and interest in educating others. Beginning Master Gardeners are to participate in 30 to 70 hours of basic training in topics related to landscaping and gardening, such as soils, plant development, fertility, irrigation, plant diagnosis, pest control, etc. Following completion of the training course, students will become Advanced Master Gardeners. In this role, they will continue training under UI horticulturists in advanced topics using a hands-on approach. More importantly, with respect to team objectives, Advanced Master Gardeners become volunteer instructors and are expected answer horticultural questions from the general public, assist in organizing workshops, conferences, and other education opportunities, develop public demonstration projects, and assist communities with plant-based improvement projects.Consumer Horticulture Education: The potential target audience for this project is very large, consisting of virtually all Idaho citizens with yards, gardens, or landscapes. For the most part, this target audience will play the role of student within this objective. They will take opportunities to learn sustainable horticultural principles from numerous sources, including publications, popular press articles and presentations, workshops, conferences, demonstrations, and other teaching forums. Organized groups from this target audience, including community public works departments, garden clubs, church groups, and other interested organizations will assist by sponsoring educational gatherings.Green Industy Education: The target audience consists of all owners, managers, and employees of green industry companies. The audience will take a fairly active role in recommending curriculum, organizing teaching opportunities, and actively working to become competent horticulturists.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	33000	950000	8200	2150
2009	33500	970000	8300	2200
2010	34000	990000	8400	2250
2011	34500	1100000	8500	2300
2012	35000	1100000	8500	2300

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Advanced Master Gardener Training Workshop/Tours.

  2008 : 9 **2009 :** 9 **2010 :** 10 **2011 :** 10 **2012 :** 10

- Beginning Master Gardener Courses.

  2008 : 17 **2009 :** 18 **2010 :** 19 **2011 :** 20 **2012 :** 20

- Consumer Horticulture Education Media Publications/Programs.

  2008 : 260 **2009 :** 265 **2010 :** 270 **2011 :** 275 **2012 :** 275

- Consumer Horticulture Education Personal Contacts/Visits.

  2008 : 6300 **2009 :** 6350 **2010 :** 6400 **2011 :** 6450 **2012 :** 6450

- Consumer Horticulture Web Site.

  2008 : 0 **2009 :** 0 **2010 :** 0 **2011 :** 0 **2012 :** 0

- Consumer Horticulture Workshops/Seminars/Demonstrations.

  2008 : 240 **2009 :** 250 **2010 :** 260 **2011 :** 270 **2012 :** 275

- Green Industy Education Workshops/Seminars/Clinics.

  2008 : 25 **2009 :** 26 **2010 :** 27 **2011 :** 28 **2012 :** 28

- Extension Publications (peer reviewed; CIS, Bulletins, etc.)

  2008 : 0 **2009 :** 0 **2010 :** 0 **2011 :** 0 **2012 :** 0

- Master Gardener Volunteer Hours.

  2008 : 9900 **2009 :** 10000 **2010 :** 10100 **2011 :** 10200 **2012 :** 10200

V(I). State Defined Outcome

1. Outcome Target

O: Beginning Master Gardeners will obtain adequate knowledge of horticultural principles to help or instruct other people.I: Marked increase in knowledge as measured by percentage increase in before and after test assessments.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
35	35	35	35	35

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Increase in Master Gardener retention and contribution.I: Increase in the number of hours contributed by Master Gardener volunteers.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
9900	10000	10100	10200	10200

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

1. Outcome Target

O: Consumers have access to appropriate information about horticulture when they need it.I: Number of web site hits.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20000	25000	30000	35000	40000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Less water is used to maintain consumer landscapes and gardens.I: Number of water conservation practices (xeriscaping, drip irrigation, etc.) showing increasing rates of adoption by the public.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	3	4	5	5

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems

1. Outcome Target

O: Green industry managers and employees are equipped to help solve consumer problems.I: Estimation by green company owners of percentage of adequately trained employees.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
54	56	58	60	60

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Appropriations changes
- Competing Programatic Challenges
- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Economy
- Public Policy changes
- Competing Public priorities
- Government Regulations

Description

Because the overriding objective of the team is education of Idaho's citizens with respect to sustainable horticultural principles, any factor that influences how and where people live will impact the program. A growing population will bring greater demand for educational resources. Increased demands on resources will bring changes in regulations and public policy, thus resulting in greater demand for knowledge about conservation principles. The economy also has an impact as it affects personal dollars available for aesthetic considerations in people's lives. Natural disasters have the same type of impact.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Time series (multiple points before and after program)
- During (during program)
- Before-After (before and after program)
- Retrospective (post program)

Description

Master Gardner Education: Assessment of the Master Gardener project will include measures of retention and contribution. Each year the proportion of Master Gardener volunteers still active out of those completing the course, will be calculated. Logs of volunteer hours will be maintained and the total statewide hours tabulated. Student improvement will be measured using before and after exams. The number of new or improved teaching tools will be tabulated by polling educators.Consumer Horticulture Education: A visitor counter will be installed into the new horticulture web site. The number of hits will be recorded each year. Assessment of other educational impacts is difficult. It is proposed that a random public survey be used to determine the proportion of people who have adopted sustainable practices. Improvement will be monitored each year.Green Industry Education: A visitor counter is installed in the green industry web site. The number of visitors will be recorded each year. Assessment of success with workshop/seminar education will be based on satisfaction of company owners/managers. They will be polled to determine the percentages of employees they feel are adequately trained.

2. Data Collection Methods

- Unstructured
- Other (Performance Evaluations)
- Mail
- Whole population

Description

Data for showing effective Master Gardener course instruction will consist of scores from before and after exams. Master Gardener

retention will be based on records maintained in county offices of activity for individual graduates. Master Gardener contribution will be based on the number of volunteer hours provided each year and data will be collected in county offices using service logs.Visitor counters will provide information on impact of educational web sites. Informal on-site or telephone polls of green industry company owners will provide data on the number of effectively trained employees.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Community Development

2. Brief summary about Planned Program

The Community Development topic team is comprised of 21 members, including 4 campus Specialists and 14 Extension Educators located throughout Idaho. CD team members have subject matter responsibility in various disciplines and focus 10% -80% of their time in Community Development for a combined total of 4.8 FTE. Community Development issues to be addressed were identified at the grassrooots level through advisory committees, on-line surveys, stakeholder meetings, personal interviews and a statewide needs assessment. The Community Development team has identified four priority areas for statewide emphasis over the next six years. These priorities are: 1) Leadership Development & Civic Engagement 2) Economic Development, Diversity, & Vitality 3) Wildland/Urban Interface and 4) Data Tools for Understanding Communities. Many of the 6-year programming efforts will focus on capacity building of communities, organizations, businesses and individuals. These projects will involve partnering with other state and multi-state organizations and include a longer-term intervention to maximize program impacts.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 111 10% Conservation and Efficient Use of Water
- 601 20% Economics of Agricultural Production and Farm Management
- 608 40% Community Resource Planning and Development
- 803 10% Sociological and Technological Change Affecting Individuals, Families and Communities
- 805 10% Community Institutions, Health, and Social Services
- 903 10% Communication, Education, and Information Delivery

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Communities across Idaho are changing. Small towns and rural residents face huge challenges due to economic and demographic changes. The traditional natural resource and agriculture industries are employing less people. Urban areas are growing and new demands for recreational use of land and water, and preservation of the environment are increasing. To assist community leaders in Idaho in addressing these changes 4 priorities will addressed: 1) the need for skilled, active volunteer leadership to help in strengthening Idaho communities 2) utilization of available accurate data to help Idaho communities make better decisions 3) helping communities to deal with changes and conflict due to growth in more populated areas of Idaho pushing into rural areas and 4) strengthening Idaho's economy and assisting in diversification of existing business & industry.

2. Scope of the Program

- In-State Research
- Multistate Extension
- In-State Extension
- Multistate Integrated Research and Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Overall logic model assumption: If Idaho residents actively participate in UI Extension community development programs they will increase knowledge and develop needed skills in order to make better decisions for increasing the quality of life in their communities.Additional resource assumptions:

Extension Educators will provide leadership to assist Idaho Extension Educators in developing expertise in the four Community Development program focus areas.
Funding will be available to assist the Community Development Team members in traveling throughout Idaho to conduct programming, train other Extension Educators, and provide technical assistance to communities.
Funding will be available for Community Development Team members to meet to plan statewide programs and develop curricula as needed to carry out Community Development programming throughout Idaho.
University of Idaho Extension will cooperate and collaborate with other Idaho agencies and organizations serving communities for maximum impact and to reduce inefficiencies.

2. Ultimate goal(s) of this Program

To improve the quality of life for Idaho citizens.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	5.2	0.0	2.3	0.0
2009	5.2	0.0	2.3	0.0
2010	5.2	0.0	2.3	0.0
2011	5.2	0.0	2.3	0.0
2012	5.2	0.0	2.3	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Leadership Development & Civic Engagement: Formation of local leader steering committees to guide design, implementation and evaluation of community leadership program. Community members and faculty will be involved in leadership trainings, field trips, meeting observations, completing community projects, and individual leadership assessments. Program to be based on Colorado State University EVOLVE Leadership Project. Training for faculty will be provided through collaborative effort with Wyoming Extension System.Wildland/Urban Interface: A University of Idaho & Agency team will be formed to develop 6 year plan of work focusing on water quality & quanity and land use planning issues. This team will be conducting conferences and workshops to address appropriate issues.Data Tools for Understanding Communities: County demographic data will be collected and published in 42 individual county brochures. Data will also be presented in PowerPoint format for use in presentations by UI Extension Educators. Reference materials to build capacity of faculty will be prepared and distributed.Economic Development, Diversity & Vitality Projects (Customer Relations, Business & Community Entrepreneurship, and Analysis of Economic Viability of Planned Buinesses): Projects will involve teaching in-depth workshop series, developing curriculum, workshops for business owners & employees, consulting with business owners, and completing economic viability analysis.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Group Discussion • One-on-One Intervention • Education Class • Workshop • Other 1 (Coaching/Mentoring) • Demonstrations	• Web sites • Newsletters • Other 1 (Newspapers) • Public Service Announcement • TV Media Programs

3. Description of targeted audience

1) Small business owners in idaho2) Government organizations/agencies in Idaho3) Community non-profit organizations 4) Entrepreneurs - current and future5) Elected officials & decision makers (state & local)6) State & local employees7) New leaders and individuals currently serving in leadership rolesTarget audiences will participate in educational training opportunties. In many instances target audiences will also be involved in designing of programs, serving on steering committees, teaching of curriculum, recruiting of program participants, and in evaluation & redesign of programs.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	847	0	43	0
2009	835	0	42	0
2010	710	0	35	0
2011	723	0	36	0
2012	750	0	40	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	1	0
2009	1	0
2010	1	0
2011	1	0
2012	1	0

V(H). State Defined Outputs

1. Output Target

- Steering Committees/Teams formed.

  2008 :2 **2009 :**2 **2010 :**2 **2011 :**2 **2012 :**2

- Materials/Curriculum developed.

  2008 :3 **2009 :**1 **2010 :**0 **2011 :**0 **2012 :**1

- Presentations/Workshops.

2008 : 34 **2009 :** 32 **2010 :** 41 **2011 :** 31 **2012 :** 25

- Trainings- Series/Short Courses.

2008 : 6 **2009 :** 12 **2010 :** 20 **2011 :** 20 **2012 :** 15

- Conferences organized or implemented.

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

- Ind/Boards/Com- Mentored/Coached.

2008 : 13 **2009 :** 16 **2010 :** 10 **2011 :** 9 **2012 :** 12

- Communities served.

2008 : 20 **2009 :** 19 **2010 :** 14 **2011 :** 11 **2012 :** 15

- Counties served.

2008 : 32 **2009 :** 32 **2010 :** 32 **2011 :** 32 **2012 :** 32

V(I). State Defined Outcome

1. Outcome Target

O: Elected officials, decision makers, government agencies, and civic organizations will become knowledgeable about data relevant to their communities.
I: Number of participants who increase knowledge about local data & how to find it. (Retrospective Post)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 40 **2009 :** 40 **2010 :** 40 **2011 :** 40 **2012 :** 40

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

1. Outcome Target

O: Entrepreneurs: Current & future Idaho Entrepreneurs learn business practices and develop skills needed for starting a business
I: Number of participants learning skills

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 20 **2009 :** 40 **2010 :** 40 **2011 :** 40 **2012 :** 40

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

O: Entrepreneurs establish or expand their business
I: Percentage of business owners establishing or expanding their business. (Annual survey/3 yrs.)

2. Outcome Type : Change in Action Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
25	25	25	25	25

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 903 - Communication, Education, and Information Delivery

1. Outcome Target

O: Customer: Small business owners & government organizations in Idaho learn customer relation practices.
I: Number of participants achieved a threshold level of knowledge. (Pre/post test)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
60	80	80	80	80

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 903 - Communication, Education, and Information Delivery

1. Outcome Target

O: Customer: Small business owners and government organizations adopt customer oriented operating practices
I: Percentage of participants indicated adoption of 1/2 recommended practices. (6 mo. follow-up checklist survey)

2. Outcome Type : Change in Action Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
60	60	60	60	60

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 903 - Communication, Education, and Information Delivery

1. Outcome Target

O: Leadership: Incumbent and emerging leaders learn skills for leadership positions.
I: Number of participants with increased skills

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
30	30	30	30	30

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

1. Outcome Target

O: Leadership: New leaders will assume leadership roles
I: Number of new leaders serving in communities. (2 yr. follow up checklist/count)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
15	15	15	15	15

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Public priorities
- Appropriations changes
- Competing Programatic Challenges
- Economy
- Other (Budget)

Description

Primary factors affecting the succcess of this topic team are 1) competing demands on time of faculty to work in other topic team areas 2) continued support of Community Development work by UI Extension Director 3) continued training funds for building Community Development expertise among faculty 4) continued funding for travel to further expand statewide Community Development programming emphasis.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Time series (multiple points before and after program)
- During (during program)
- Before-After (before and after program)
- After Only (post program)

Description

None planned.

2. Data Collection Methods

- Unstructured
- Telephone
- Structured
- Tests
- Mail
- Observation

Description

Data collection methods vary with individual outcome to be measured. Information is listed on page #13.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Dairy

2. Brief summary about Planned Program

The overall goal of the dairy topic team is to help Idaho producers improve profitability and productive efficiency of their farm business and thereby improve the well-being of their families and communities. The dairy topic team has three projects addressing the critical issues of dairy management education, dairy nutrition, and reproductive efficiency. The dairy topic team will accomplish our goals through educational programs that include workshops, seminars, applied on-farm demonstrations, publications, and website development. We will work with dairy producers, allied industry, private consultants, industry organizations, and state regulatory agencies.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 301 20% Reproductive Performance of Animals
- 302 20% Nutrient Utilization in Animals
- 305 20% Animal Physiological Processes
- 307 20% Animal Management Systems
- 311 20% Animal Diseases

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In 2004 Idaho's dairy operations produced 9.09 billion pounds of milk, solidifying Idaho as the fourth largest milk-producing state in the nation, and the second largest in the western US. Idaho cash milk receipts in 2004 were $1.36 billion, which translated into a $ 4.5 billion contribution to the state's economy through allied industry and dairy processing sales and jobs. In December 2005, Idaho had 722 dairies with 472,000 lactating cows. The Idaho dairy industry is poised to grow further in 2006-2007 as there are state and local permits currently being processed for another 80,000 cows.Each year, Dairy Extension Advisory Boards composed of dairy producers, allied industry personnel, and veterinarians meet to discuss key issues to the Idaho dairy industry. Current topics important to the dairy industry include continued development and delivery of unbiased science-based information for producers and their employees, allied industry, veterinarians, and the general public, in the following areas: a) management and education, b) nutrition, and c) reproduction.Management and EducationDairy farm management has become increasing complex. Dairy producers need unbiased information resources that address current issues in the industry. Employees need training to improve job knowledge and skills. Public education of youth and adults is essential to maintain a positive public perception of the dairy industry and its value to Idaho. Emerging and continuing issues include: 1) Owner, employee, and allied industry education in both English and Spanish; 2) Improving milk quality; 3) Improving dairy facilities with emphasis on cow comfort; and 4) Youth and public education.NutritionDairy nutrition is a key factor for achieving productive efficiency and profitability on Idaho dairy farms. The field of dairy nutrition has become increasingly complex. Research and extension play important roles in dairy nutrition through unbiased review of current nutritional topics and practices and assisting individual producers in troubleshooting herd nutritional problems. Emerging and continuing issues include: 1) Feeding management; 2) Feed quality; 3) Feed efficiency; and 4) Nutrient excretion.ReproductionDairy profitability increases as pregnancy rate increases. This is because as pregnancy rate increases, the average days in milk of the herd will decrease-resulting in a larger proportion of the herd earlier in lactation. This translates into more milk per cow per day. Furthermore, as pregnancy rate increases, decreased culling may occur due to reproductive failure and low milk production. Emerging and continuing issues include: 1) Improving reproductive efficiency by development of improved estrus or ovulation synchronization protocols and reducing pregnancy loss.University of Idaho Dairy research and extension programs have successfully provided science-based programs to Idaho dairy producers, their employees, allied industry and veterinarians for many years. The integration of optimal production practices, adoption of new technology, and an educated workforce has helped the growth and profitability of the Idaho dairy industry, and will continue to do so in the future.

2. Scope of the Program

- In-State Extension
- Multistate Research
- Multistate Integrated Research and Extension
- In-State Research
- Integrated Research and Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Our first assumption is that dairy producers recognize the value of training programs for their hired workers. Educational workshops are planned for Hispanic workers in several subject matter areas (milking management, feeding management, AI technique, and calf rearing practices). Our second assumption is that the schools will increase understanding and knowledge of appropriate dairy management practices. We will test this assumption by using pre- and post testing at each of the schools. Finally, we assume that the dairy workers and dairy managers will adopt the University recommended practices on their operation. The benefits of practice adoption vary between the four schools. Improved milking management should result in better compliance with recommend milking practices, lower milk somatic cell counts and reduced clinical mastitis. Improved feeding management should result in higher fat concentration, improved milk production, reduced lameness, and healthier cows. Adopting recommended AI practices should result in improved conception rates, lower semen costs, and higher reproductive efficiency. Improved calf rearing practices should reduce calf disease and calf mortality losses. Farm profitability and productive efficiency is improved in all four examples.

2. Ultimate goal(s) of this Program

The ultimate goals of the dairy topic team is to help dairy producers identify and implement dairy production and management practices that are economically profitable, environmentally friendly, and socially acceptable.Management and EducationDairy managers will have current information to make informed management decisions.Dairy employees (both English and Spanish speaking) will understand principles of recommended production practices.Milk quality will improve with fewer antibiotic residue problems and lower somatic cell counts.New and remodeled facilities will be better designed to improve cow comfort.NutritionFeeding management will improve to provide a more consistent ration to all cattle.Improved ration formulation will reduce nutrient excretion caused by excessive nutrients in the diet.ReproductionDairy managers will better understand strategies to improve reproductive performance.Improved and/or properly used synchronization protocols will result in increased pregnancy rates.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.1	0.0	2.9	0.0
2009	2.1	0.0	2.9	0.0
2010	2.1	0.0	2.9	0.0
2011	2.1	0.0	2.9	0.0
2012	2.1	0.0	2.9	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conducting educational programs, developing educational materials, writing popular press articles, preparing newsletters, developing a dairy webpage, and working with individual dairy operations. Dairy schools will be held in formal classroom settings and informal settings on dairy operations, Conduct basic and applied research.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Education Class • Workshop • Demonstrations • One-on-One Intervention	• Newsletters • Other 1 (Popular press articles) • Web sites

3. Description of targeted audience

The target audiences most likely to participate in and benefit from dairy extension programs are: dairy producers, dairy workers, and allied industry. These audiences will participate by serving on planning committees, attending workshops/schools, meeting one-on-one with topic team members, reading extension publications, and participating in on-farm projects.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	2000	220000	500	0
2009	2000	220000	500	0
2010	2000	220000	500	0
2011	2000	220000	500	0
2012	2000	220000	500	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0 **2009 :** 0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	3
2009	2	3
2010	2	3
2011	2	3
2012	2	3

V(H). State Defined Outputs

1. Output Target

- Winter Dairy Forums.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Milker schools.

  2008 :6 **2009 :**6 **2010 :** 6 **2011 :**6 **2012 :**6

- Calf Schools.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**3

- Artificial Insemination Schools.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**3

- Feeder Schools.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Milk Quality trial (cooperators).

  2008 :7 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Popular Press articles.

  2008 :10 **2009 :**10 **2010 :** 10 **2011 :**10 **2012 :**10

- University Publications (peer reviewed).

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Abstracts and Proceedings.

  2008 :4 **2009 :**5 **2010 :** 4 **2011 :**5 **2012 :**4

- Journal articles.

  2008 :2 **2009 :**1 **2010 :** 1 **2011 :**2 **2012 :**1

- Heifer reproduction trials.

  2008 :2 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

O: Dairy Producers and workers will increase knowledge by attending dairy schools and dairy forums.I: Number attending schools and forums.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :200 **2009 :** 200 **2010 :** 200 **2011 :**200 **2012 :** 200

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems

1. Outcome Target

O: Dairy workers will increase knowledge and understanding of dairy management practices.I: Percent knowledge change by attendees (as evaluated with pre/post testing).

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases

1. Outcome Target

O: Sound dairy management practices will be adopted by dairy operations as a result of attending the management schools.I: Percent of participants with intent to adopt recommended dairy management practices (assessed with post/pre testing).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases

1. Outcome Target

O: Improved calf health on participating farms.I: Percent reduction in calf mortality and scours (farm survey).

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 311 - Animal Diseases

1. Outcome Target

O: Dairy workers will use proper techniques taught in dairy education programs (e.g., AI techniques, feeding adjustments, milking techniques).I: Percent of participants demonstrating mastery (assessed at dairy education programs).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems

- 311 - Animal Diseases

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 : 2 **2009 :** 2 **2010 :** 2 **2011 :** 2 **2012 :** 0

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 307 - Animal Management Systems
- 311 - Animal Diseases

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Programatic Challenges
- Economy
- Government Regulations
- Appropriations changes

Description

Dairy research and extension faculty receive support from state funds and from industry grants, in addition to USDA (NRI). The dairy industry has asked the University to develop an "exit strategy" for their extensionj travel support. We will need to remain within federal and state guidelines while potentially charging for farm visits and educational meetings. Charging for farm visits (that have traditionally been paid for with tax dollars) will not be a popular move and could impact participation and support for dairy extension programs. Continued success in UI Dairy programs will continue to depend on maintenance and expansion of funding from sources listed above.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- After Only (post program)

Description

Post/pre testing will be utilized to measure knowledge change and practice adoption. Pre/post testing will be utilized to measure knowledge change. Follow-up surveys will be utilized to determine changes in calf health and feeding management practices as a result of attending calf and feeder schools.

2. Data Collection Methods

- Telephone
- Tests
- Other (Performance Evaluations)
- On-Site

Description

We will conduct post/pre testing and pre/post testing at educational meetings. We will count the number of meeting participants. We will use follow up surveys to assess impacts on calf and feeding management. We will record the number of web hits to

assess the use of SOP writer.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Family Economics

2. Brief summary about Planned Program

Individuals and families are having a difficult time making ends meet. Idaho families are larger than the national average and their per capita income was only $27,098 in 2004, placing the state in the bottom quintile of US states. Sixty-two percent of Idaho households earn less than $50,000. Lower income households lack financial awareness, according the American Savings Education Council. They are less likely to participate in the mainstream financial system. Money management is a critical life skill. Forty percent of American families report living beyond their means and have significant credit card debt. Individuals have an average of eight credit cards with a debt of $8,000. Idaho ranks in the top quartile in the US for personal bankruptcy. Recent research indicates that these financial problems negatively impact employee productivity. Politicians identify a need for financial management education. Local government officials responding to the 2004 University of Idaho (UI) Extension survey, Your Idaho Community: Present and Future Needs indicated a greater interest in financial planning topics than nearly any other program area. In his 2005 State of the State address, Governor Kempthorne stated, “We must encourage future generations of Idahoans to plan for their financial and health care needs.” Financial education was the topic Idaho residents responded they would most prefer obtaining through class attendance. Thirteen percent of Idahoans are age 65 and older. That number is expected to double as baby boomers reach retirement age. In some rural Idaho communities elderly residents are a major portion of the population. The sky-rocketing cost of health care, the solvency and continuation of Social Security, Medicare, Medicaid and private pension benefits will impact Idahoans' financial security. Baby boomers, young retirees and their adult children are requesting educational programs to prepare and cope with later life challenges. Idaho residents need to take action to assure their legal, long term care and retirement planning needs are in met. Studies indicate that adults have not prepared legal documents, gathered and organized important papers, sought legal advice and/or planned for the escalating cost of long term care. Many children and adolescents are not being taught how to manage their money by their parents or through personal finance courses in schools. Yet, teens are active consumers, spending 98% of their money instead of saving it. Additionally, more than 1 in 5 youth ages 12 to 19 have their own credit cards or have access to parent’s credit cards, and 14% have debit cards. Youth need to be taught how to make sound financial decisions and manage their resources in order to avoid the financial pitfalls that many American families face today.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 801 100% Individual and Family Resource Management

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Idahoans need unbiased research-based information and education to effectively manage their financial resources. They are faced with financial decisions that greatly influence their short, medium and long term well-being. Peoples’ financial education needs change as they progress through the life cycle. The areas listed below are current and identified by stakeholders. Basic Financial Management: Individuals lack awareness, knowledge and skills to:
Set financial goals
Track expenses
Prepare and use spending plans
Organize and maintain financial records
Use credit wisely
Get out of debt
Guard against identity theft
Save for the future
Use technology to manage finances

Financial Security in Later Life: Planning for later life issues impacts financial security, topics to be addressed include:
Retirement planning
Investing
Planning for long term care
Organizing important papers, advanced directives and estate planning topics
Understanding Social Security and Medicare programs
Youth Financial Literacy: Young people who learn money management skills early are more likely to be better financial managers in adulthood. Topics to be addressed with youth include:
Financial decision making
Money management and consumer skills
Employability skills
How education levels impact employment opportunities and income

2. Scope of the Program

- In-State Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Team assumptions include:
Maintenance and/or increase in numbers of faculty and staff in the program including -extension specialist, county extension educators, EFNEP and ENP advisors, support staff
Continuation of funding sources: private, public-local, state, and national
Continuation of family economics as a family and consumer sciences department and extension priority
Consumers relying on extension as a viable source of information and education
Financial management knowledge and education will be important to Idaho residents
Learners will achieve incremental increases in awareness, knowledge and will adopt new practices over time
Need for financial education will continue and increase
New target audiences will be reached
Consumer adoption of new techology will change what and how extension delivers financial education
Minority population increases will continue and impact delivery methods
Financial education needs will be impacted by environmental, political and economics conditions.

2. Ultimate goal(s) of this Program

Ultimately, Idaho residents will be provided with unbiased, research-based information and education to effectively manage their finances for optimum economic and emotional well-being. This education and delivery must address issues that are timely and identified by stakeholders and should be relevant to the six years of this planning cycle. In addition, ultimate goals of the family economics plan of work are:
Increase awareness of extension family economics programs.
Increase use of extension family economics information and programs.
Extend family economics programs to new and diverse audiences.
Increase decision-makers' awareness and knowledge of UI Extension family economics programming and outcomes.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	3.3	0.0	0.0	0.0
2009	3.3	0.0	0.0	0.0
2010	3.3	0.0	0.0	0.0
2011	3.3	0.0	0.0	0.0
2012	3.3	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

The Family Economics Topic Team has planned the following activities:
Meet with advisory committees, cooperating agencies, partners and decision-makers to receive feedback and to update them about family economics issues and programs.
Interact with professionals at meetings to share knowledge, build partnerships, and gain insights into national, regional and local issues and priorities.
Keep updated on current research and trends in the field.
Develop, seek peer reviews, pilot test, publish, and market curriculums- Spanish language version of Dollar Decision$, Credit Cents, Succeeding in the Working World, Retirement education and others that meet audience needs.
Author and publish popular press articles, newsletters, and Extension publications. Author and submit professional journal articles, abstracts and proceedings papers.
Develop posters that describe programs outcomes and impacts.
Develop and maintain a financial education website.
Market, conduct and evaluate the following educational programs- Dollar Decision$, Gaining Financial Fitness, Credit Cents, Guarding Against Identity Theft, Organizing Financial Records, Retirement Planning, Long Term Care, Legally Secure Your Financial Future, Who Gets Grandma's Yellow Pie Plate, Money on the Bookshelf, Welcome to the Real World, High School Financial Planning Program, Succeeding in the Working World and others that meet identified audience needs.
Work with the media to increase program awareness and participation.
Develop innovative marketing methods to increase program awareness and participation.
Document and report family economics programs and accomplishments.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Workshop • Group Discussion • One-on-One Intervention • Other 1 (Train the trainer) • Education Class	• Billboards • Web sites • Public Service Announcement • TV Media Programs • Newsletters

3. Description of targeted audience

Basic Financial Management: Young adults and those who are new to financial management (widows, divorcees, immigrants, etc.) and individuals who need to improve their financial management practices will use family economics publications, web sites and participate in classes/workshops. Professionals who work with low-income audiences and those with financial challenges will be trained and/or provided with family economics publications and curriculum.Financial Security in Later Life: Adults will utilize publications, web sites, and educational programs covering retirement planning, investing, government programs benefitting senior citizens, long term care and legal education. Mid-life and older adults who are caretakers of elderly relatives and friends will use

publications, the website and/or attend classes. Profesionals who serve elderly clients will use publications, curriculum materials, website and/or training provided by extension. Youth Financial Literacy: Teachers, youth group leaders, parents and youth will utilize web sites, publications and educational programs. Teachers and youth group leaders will purchase extension curriculum for youth.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	4000	90000	1500	2000
2009	4000	90000	1500	2000
2010	4000	90000	1500	2000
2011	4000	90000	1500	2000
2012	4000	90000	1500	2000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	7
2009	0	7
2010	0	7
2011	0	7
2012	0	7

V(H). State Defined Outputs

1. Output Target

- Newsletters.

  2008 :22 **2009 :**22 **2010 :**22 **2011 :**22 **2012 :**22

- Extension bulletins.

  2008 :1 **2009 :**1 **2010 :**1 **2011 :**1 **2012 :**1

- Popular Press articles.

  2008 :6 **2009 :**6 **2010 :**6 **2011 :**6 **2012 :**6

- Refereed journal articles, peer reviewed abstracts.

2008 :6 **2009 :**6 **2010 :** 6 **2011 :**6 **2012 :**6

- Professional or paraprofessional trainings.

2008 :4 **2009 :**4 **2010 :** 4 **2011 :**4 **2012 :**4

- Classes, workshops.

2008 :100 **2009 :**100 **2010 :** 100 **2011 :**100 **2012 :**100

- Websites developed or updated.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- EFNEP/ENP graduates taught financial education.

2008 :500 **2009 :**500 **2010 :** 500 **2011 :**500 **2012 :**500

- Lesson/curriculums developed and published.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

O: Participants increase awareness of effective financial management practices.I: Number of participants reporting awareness on end-of-class evaluations.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :1000 **2009 :** 1000 **2010 :** 1000 **2011 :**1000 **2012 :** 1000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

1. Outcome Target

O: Participants gain new personal finance knowledge.I: Knowledge gain reported on end-of-program evaluations.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :800 **2009 :** 800 **2010 :** 800 **2011 :**800 **2012 :** 800

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

1. Outcome Target

O: Participants adopt recommended financial practices.I: Participant responses on end-of-program and follow-up evaluations.

2. Outcome Type : Change in Action Outcome Measure

2008 :300 **2009 :** 300 **2010 :** 300 **2011 :**300 **2012 :** 300

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

1. Outcome Target

O: Extension Family economics will reach new audiences through an Urban Extension website.I: Number of sessions and pages visited.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3000	3000	3000	3000	3000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

1. Outcome Target

O: Extension family economics publications will be used by consumers and professionals.I: Number of publications distributed.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1000	1000	1000	1000	1000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Economy
- Populations changes (immigration,new cultural groupings,etc.)
- Appropriations changes
- Natural Disasters (drought,weather extremes,etc.)
- Competing Public priorities
- Government Regulations

Description

Topic team success is dependent on economic stability, minority groups becoming proficient in the English language, and decision-makers continuing to support financial education.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- After Only (post program)

Description

Evaluating the effectiveness of family economics classes, workshops and seminars will be accomplished by conducting post-tests, pre-post tests, and retrospective evaluations from program participants. In a few selected programs, three to six month follow-up surveys will be mailed to and collected from participants.

2. Data Collection Methods

- Mail
- Tests
- On-Site
- Other (Anecdotal information from parti)
- Sampling
- Unstructured

Description

To determine the number of participants who increase awareness, gain knowledge and adopt recommended practices, we will survey attendees at classes and workshops. Pre- and post- assessment tools will be utilized. For selected programs, three or six-month follow-up surveys will be conducted. Anecdotal information about practices that benefitted the learner may be collected during classes or at other meetings.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Family Life Education

2. Brief summary about Planned Program

The Family Life Education topic team develops and implements high quality research-based educational programs for parents and couples and other family adults such as grandparents.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 802 100% Human Development and Family Well-Being

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Idaho's families are challenged to maintain positive family relationships in the context of today's busy lives. Recent decades of change for families mean that many dilemmas for today's families look different from those of their family of origin. As a result, family adults need reliable sources of information to meet these new family needs.The University of Idhao Extension program is in a unique position to bring this information to Idaho families. UI Extension has an established role in face-to-face workshops on family issues, and also offers published materials on the subject. UI Extension's recent survey of Idaho homes shows that about half of Idaho families currently have access to the internet, a sector likely to increase in upcoming years. Increasing availability of materials on the web should be an effective way to reach many Idaho homes with research-based family life information.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Recent decades of research in family relationships can offer guidance about effective parenting strategies for today's families. Well-structured adult education programs can promote changes in knowledge about family life issues and can help people better meet their personal and family goals.

2. Ultimate goal(s) of this Program

University of Idaho Extension meets the needs of Idaho families for family life education.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	1.5	0.0	0.0	0.0
2009	1.5	0.0	0.0	0.0
2010	1.5	0.0	0.0	0.0
2011	1.5	0.0	0.0	0.0
2012	1.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Maintain 13 Parents as Teachers program sites, contingent on funding, including personal visits, group meetings, child screenings and referrals.Offer Married and Loving It! workshopsSupport Grandparents as Parents support groupsOffer workshops on aging life issuesDevelop web-based materials on parenting, couple relationships, and aging life issues

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Workshop • One-on-One Intervention • Education Class • Group Discussion	• Other 1 (Extension publications) • Newsletters • Web sites • TV Media Programs

3. Description of targeted audience

Family adults, parents, and grandparents, members of couple relationships.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	270	5000	270	0
2009	270	5000	270	0
2010	270	5000	270	0
2011	270	5000	270	0
2012	270	5000	270	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	1
2010	0	0
2011	0	1
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Maintain Parents as Teachers sites.

  2008 :13 **2009 :**13 **2010 :** 13 **2011 :**13 **2012 :**13

- Offer Married and Loving It series.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Offer workshops on aging life issues.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Web-based educational materials.

  2008 :2 **2009 :**4 **2010 :** 6 **2011 :**8 **2012 :**8

- Newsletter articles.

  2008 :5 **2009 :**5 **2010 :** 5 **2011 :**5 **2012 :**5

- Peer reviewed publications.

  2008 :0 **2009 :**1 **2010 :** 0 **2011 :**1 **2012 :**0

- Conference posters/presentations.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

O: People apply recommended practices to deal with issues and situations important for families. I: Number of participants in Family Life Education program (PAT MALI, Aging, Etc.) reporting adoption of recommended practices.

2. Outcome Type : Change in Condition Outcome Measure

2008 :150 **2009 :** 150 **2010 :** 150 **2011 :**150 **2012 :** 150

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

O: People are knowledgeable about issues and practices important for families.I: Number of participants in Family Life Education programs (PAT, MALI, Aging, etc.) demonstrating changes in knowledge.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
200	200	200	200	200

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

O: Users of web-based family life materials find useful information that addresses their needs.I: Number of participants accessing the materials who rate the information as useful.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	80	120	150	200

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Public priorities
- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Public Policy changes
- Competing Programatic Challenges
- Appropriations changes
- Economy

Description

Family life is affected by external stressors such as economic recession or depression, natural disaster, or community distress such as increased crime or substance abuse.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- During (during program)
- After Only (post program)
- Before-After (before and after program)
- Retrospective (post program)

Description

We have established evaluation tools for the Married and Loving It curriculum and for the Parents as Teachers program. We will develop an evaluation tool for aging life issues/grandparenting. We will use a web-based survey to evaluate the electronic family life materials.

2. Data Collection Methods

- Telephone
- On-Site

Description

We will use retrospective pretest/post-test comparisons, as well as surveys.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Farm and Ranch Management

2. Brief summary about Planned Program

The overall goal of the Farm and Ranch Management program is to help Idaho producers improve the efficiency and financial performance of their farm or ranch business, and thereby improve the well-being of their families and communities. The program seesk to achieve this goal by providing producers with the financial management and marketing skills, tools, analysis and the unbiased information necessary to evaluate the cost effectiveness of alternatives and to make decisions based on sound business management principles. The program uses a variety of different methods, including workshops, seminars, publications, computer-based decision aids and the Internet. The farm managment program includes both the development and distributition of resource materials, as well as conducting formal and informal educational programs.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 601 35% Economics of Agricultural Production and Farm Management
- 602 25% Business Management, Finance, and Taxation
- 603 15% Market Economics
- 605 15% Natural Resource and Environmental Economics
- 606 10% International Trade and Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

To survive in today's dynamic market environment, Idaho's farmers and ranchers must manage their operations using sound economic principles and appropriate management tools. Farmers and ranchers need solid business plans that include both a short-term (operational) and long-term (strategic) focus. They must also have access to reliable, up-to-date and un-biased information and analytical tools.Structural changes that are outside the direct control of Idaho's farmers and ranchers continue to impact their economic situation. Government policies on agriculture, trade and the environment shape the business climate and the issues impacting agriculture. Mergers and consolidation among input suppliers, financial institutions, merchandisers and processors bring additional challenges. Globalization of agricultural markets and the industrialization of agricultural production are also contributing to the changing economic environment. Producers face declining margins as many commodity prices decline while input costs rise, especially those tied to oil. At the same time producers are under pressure to improve economic efficiency, they face more stringent constraints on their management alternatives as society places an increasing emphasis on environmental protection and resource conservation. Idaho producers must also deal with region-specific issues that include water rights, endangered species, grazing on public lands, and protracted drought. Farmers and ranchers need good business management skills in order to maintain a profitable operation when input prices are escalating and commodity prices are falling or stagnant. Farmers and ranchers also need timely access to farm management resource material, resource management tools and unbiased market and management information.Short Term Issues: With low commodity prices and rising input costs, existing farms/ranches will not cash flow and beginning farmers/ranchers cannot get financing. Farms/ranches need tools to help them develop costs and returns estimates and cash flow budgets.Intermediate Term Issues: With low commodity prices, rising input costs, changes in farm programs and trade policies, farms/ranches are struggling to remain profitable. Farms/ranches need to evaluate alternatives and have a thorough understanding of there financial situation.Long Term Issues: Farms/ranches must continue to expand in order to achieve/maintain efficiency, but risk increases. Farmers/ranchers need to develop transition/estate plans as they evaluate the economics of passing the farm/ranch to the next generation.

Results of these research and extension activities will provide information to policy makers and to people evaluating farm and ranch property economic values and the role of public grazing rights held by ranchers. We also strive to obtain greater knowledge of international trade as it is affected by policies and trade agreements. This goal is combined with attempts to provide a better understanding of export

practices to enhance the opportunity for Idaho and the Pacific Northwest for maintaining a strong export market for agricultural products. We will develop models for price outlook for crop producers in the Pacific Northwest and provide information permitting these farmers to market products more effectively and/or reduce price risk.

2. Scope of the Program

- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension
- In-State Research
- Multistate Research
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The agricultural sector will continue to be negatively impacted by structural changes outside the control of individual farmers and ranchers as discussed in the situation statement. Not all farmers and ranchers will survive the financial challenges. Farmers and ranchers who want to continue in agricultue will need increasingly sophisticated management skills. Those who won't or can't change to meet the challenge will need help in evaluating alternatives.Our basic assumption is that clientele who attend workshops or who acquire resource materials will learn something. Clientele attending farm management education programs are their voluntarily. Their time is valuable and they would not waste it attending a program that they found of no value.

2. Ultimate goal(s) of this Program

A healthy, sustainable and profitiable agricultural sector in Idaho. Clientele who have mangement skills and access to the tools and information they need to make sound business management decisions that will improve their chance of having a financially viable business.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.6	0.0	2.2	0.0
2009	2.6	0.0	2.2	0.0
2010	2.6	0.0	2.2	0.0
2011	2.6	0.0	2.2	0.0
2012	2.6	0.0	2.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conducting educational programs and developing educational material. Workshops and seminars will be held in conjunction with major commodity schools (sugarbeets, potatoes, cereals, forages, beef, etc.), as well as stand-alone programs on farm management or specific issues (new farm bill for example).

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• One-on-One Intervention • Workshop • Group Discussion • Demonstrations • Education Class	• TV Media Programs • Web sites • Other 1 (e-mail) • Newsletters

3. Description of targeted audience

Farmers, ranchers and agribusiness managers in Idaho who are interested in improving their farm business management skills comprise the target audience for the farm managment education programs. This would include farmers and ranchers who are struggling financially and need to evaluate alternatives and may need help with basic financial management concepts, as well as highly successful farmers and ranchers who want to stay at the cutting-edge, improve their efficiency and/or evaluate alternative crops/cropping systems or alternative livestock/livestock production systems.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	1200	5000	0	0
2009	1200	5000	0	0
2010	1400	5500	0	0
2011	1400	5500	0	0
2012	1500	5500	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	2
2009	0	3
2010	0	3
2011	0	4
2012	0	4

V(H). State Defined Outputs

1. Output Target

- Farm Management Classes.

2008 : 2 **2009 :** 2 **2010 :** 2 **2011 :** 2 **2012 :** 2

- Livestock Costs and Returns Estimates.

2008 : 20 **2009 :** 0 **2010 :** 20 **2011 :** 0 **2012 :** 20

- Crop Costs and Returns Estimates.

2008 : 0 **2009 :** 90 **2010 :** 0 **2011 :** 90 **2012 :** 0

- ID Agriculture's Economic Situation Pamphlet (develop and distribute no.).

2008 : 2000 **2009 :** 2500 **2010 :** 2500 **2011 :** 2500 **2012 :** 2500

- Media Contacts.

2008 : 30 **2009 :** 30 **2010 :** 30 **2011 :** 30 **2012 :** 30

- Workshops at Commodity Schools.

2008 : 6 **2009 :** 6 **2010 :** 6 **2011 :** 6 **2012 :** 6

V(I). State Defined Outcome

1. Outcome Target

O: Clientele possess latest information to use in decision making.I: Number of publications and other resources distributed, or hits on website.

2. Outcome Type : Change in Condition Outcome Measure

2008 : 200 **2009 :** 200 **2010 :** 200 **2011 :** 200 **2012 :** 200

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 605 - Natural Resource and Environmental Economics
- 606 - International Trade and Development

1. Outcome Target

O: Clientele motivated to obtain knowledge and/or learn new management skills.I: Number of clientele attending educational programs.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 1200 **2009 :** 1200 **2010 :** 1200 **2011 :** 1200 **2012 :** 1200

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

- 603 - Market Economics
- 605 - Natural Resource and Environmental Economics
- 606 - International Trade and Development

1. Outcome Target

O: Clients learn about new issues, management practices or marketing tools.I: Number of clientele attending eduational programs that indicate a change in knowledge.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
150	150	150	150	150

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 605 - Natural Resource and Environmental Economics
- 606 - International Trade and Development

1. Outcome Target

O: Clientele apply new knowledge about issues, management practices or marketing/risk management tools.I: Number of clientele attending educational programs that indicate an intention to change a practice or that have changed a practice.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 605 - Natural Resource and Environmental Economics
- 606 - International Trade and Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Competing Programatic Challenges
- Government Regulations
- Appropriations changes
- Economy

Description

The availability of resources, including personnel, appropriated funds and grant funds. A change in funding from formula funds to competitive grants would put our ability to provide a basic farm management program at risk.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- During (during program)
- Case Study
- After Only (post program)
- Before-After (before and after program)

Description

Clientele will be asked if they learned something during the program and if they learned something, did they plan on using the knowledge gained in the management of their operation.

2. Data Collection Methods

- Case Study
- Telephone

Description

We will track the number of publications and other resource material distributed. We will count the number of clientele attending educational programs. We will count the number of clientele attending workshops who indicated that they gained an increased understanding or who plan on adopting something discussed in the class/workshop. We will also track the number of clientele who contact extension for resource material and/or information, as well as the number of hits on the AERS web site.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

The Food Safety Topic Team will combine research and extension programs in a variety of units within CALS. The following is a summary of the activities that will be undertaken:

Extension Programs:

Just in Time Food Safety - Educators and volunteers will use each “teachable moment” when a consumer calls with a question to disseminate current researched-based information.

Consumer Food Safety Programs - Extension educators will offer classes and workshops on general food safety and food preservation topics.

Food Industry Assistance - The Extension Food Processing Specialist, Jeff Kronenberg, will continue to deliver general food safety and HACCP (Hazard Analysis Critical Control Points) workshops and specific food safety consulting (including on-site HACCP training, prerequisite programs training, preparation for food safety inspections and general food safety information) to the Idaho food processing industry.

Food Safety Advisor/Master Food Preserver - UI Extension trained FSA/MFP volunteers will share their expertise in their communities in a variety of ways including: answering consumer calls, providing written materials as requested, teaching classes for community organizations, preparing and manning educational displays and information booths, surveying clientele on home food preservation methods, and assisting with awareness and service activities such as pressure canner gauge testing and county fair open class food preservation class judging.

Food Service Food Safety Training - Ready, Set, Food Safe curriculum will be taught in high school FCS classes throughout the state. ServSafe will be taught to food service workers/mangers or food industry personnel requiring this level of training.

Hand Washing Education - Hand washing technique and effectiveness will be taught in a fun, “hands-on” learning experience with the use of black light sensitive lotion (such as Glo-Germ or Glitterbug lotions) and a black light.

ENP/EFNEP -Food Safety - ENP/EFNEP clients receive 15% of their education on food safety topics. These lessons vary by county in accordance with client needs.

Research Programs:

Understanding the pathogenic mechanisms used by food-borne pathogens in human hosts.

Investigating host responses to food-borne infections.

Evaluating the epidemiology of food-borne pathogens, particularly those associated with zoonotic infections originating from agricultural sources.

Developing novel methods for detection of food-borne pathogens and dangerous chemicals in food.

Develop methods for preventing food-borne infections.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 201 15% Plant Genome, Genetics, and Genetic Mechanisms
- 308 10% Improved Animal Products (Before Harvest)
- 311 10% Animal Diseases
- 504 25% Home and Commercial Food Service
- 712 40% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Food-borne illnesses continue to be a significant cause of morbidity and mortality in the US and worldwide. Research and extension

programs in our institution emphasize food-borne illnesses particularly those caused by staphylococci, E. coli, and Yersinia, three of the most significant according to USDA statistics.
The UI has a critical mass of infectious disease researchers and a number of those investigate pathogenic microbes that can cause food-borne diseases, particularly those associated with zoonotic infections.
Research priorities include:
1. Understanding the pathogenic mechanisms used by food-borne pathogens in human hosts.
2. Investigating host responses to food-borne infections.
3. Evaluating the epidemiology of food-borne pathogens, particularly those associated with zoometric infections originating from agricultural sources.
4. Developing novel methods for detection of food-borne pathogens and dangerous chemicals in food.
5. Develop methods for preventing food-borne infections.
Extension priorities include:
1. Just in Time Food Safety Information/Consumer Food Safety Programs One-quarter of people affected by food borne illness At risk groups are particularly vulnerable Young consumers lack knowledge
2. Consumer Food Safety Programs Same as 'Just in Time Food Safety Information' above
3. Food Industry Assistance Entrepreneurs need information Knowledge is required by businesses
4. Food Safety Advisor/Master Food Preserver A large population of food preservers use risky practices
5. Food Service Food Safety Training High percentage young people work in food service The state regulates how food sold to the public is handled Food businesses require trained workers
6. Hand washing Education People do not wash as well or as often as they should to prevent illness Regular hand washing for children results in fewer sick days
7. ENP-EFNEP Food Safety Limited resource families have specific challenges regarding food safety practices

2. Scope of the Program

- In-State Extension
- Multistate Research
- In-State Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Participants will need to learn: improved food handling and personal hygiene behaviors by consumer, food service and food industry audiences. The Topic Team will deliver these outputs: classes, programs, workshops, one-on-one answering questions, county and health fair exhibits, newsletters, popular press materials, internet programs/information, conference presentations. In order to deliver the outputs, the Topic Team will need to invest the following resources: extension faculty time; volunteer time; funds from program participants, state and federal; collaborations with other food safety professionals; educational materials (written materials, curricula, equipment).

Researchers will use state-of-the-art technologies to conduct their basic and applied work and technologies available will continue to evolve.

This program offers excellent opportunities for interdisciplinary collaboration.

2. Ultimate goal(s) of this Program

· Just in Time Food Safety - Consumers will experience less illness from foodborne pathogens or improperly handled food. They will also improve economic benefits through less spoilage of food.
· Consumer Food Safety Programs - Reduced foodborne illness. Increased confidence in food handling and in the safety of the U.S. food supply.
· Food Industry Assistance - Successful food processors producing safe foods.
· Food Safety Advisor/Master Food Preserver - The incidence of foodborne illness related to food prepared at home will drop due to the increased knowledge base of home food preservers. The number of home food preservers with knowledge of safe food handling, preserving and storing practices will increase.
· Food Service Food Safety Training - Reduce the number of foodborne illnesses resulting from improper handling in food establishments.
· Hand Washing Education - Improved health: less colds, flu, and food borne illness because transfer of pathogenic organisms is reduced due to improved hand washing.

- ENP/EFNEP -Food Safety - Reduced foodborne illness.
- Research programs- Reduce the threat and impact to health and the economy of food-borne infectious diseases.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	3.0	0.0	2.3	0.0
2009	3.0	0.0	2.3	0.0
2010	3.0	0.0	2.3	0.0
2011	3.0	0.0	2.3	0.0
2012	3.0	0.0	2.3	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Just in Time Food Safety - Educators and volunteers will use each “teachable moment” when a consumer calls with a question to disseminate current researched-based information.
Consumer Food Safety Programs - Extension educators will offer classes and workshops on general food safety and food preservation topics.
Food Industry Assistance - The Extension Food Processing Specialist, Jeff Kronenberg, will continue to deliver general food safety and HACCP (Hazard Analysis Critical Control Points) workshops and specific food safety consulting (including on-site HACCP training, prerequisite programs training, preparation for food safety inspections and general food safety information) to the Idaho food processing industry.
Food Safety Advisor/Master Food Preserver - UI Extension trained FSA/MFP volunteers will share their expertise in their communities in a variety of ways including: answering consumer calls, providing written materials as requested, teaching classes for community organizations, preparing and manning educational displays and information booths, surveying clientele on home food preservation methods, and assisting with awareness and service activities such as pressure canner gauge testing and county fair open class food preservation class judging.
Food Service Food Safety Training - Ready, Set, Food Safe curriculum will be taught in high school FCS classes throughout the state. ServSafe will be taught to food service workers/mangers or food industry personnel requiring this level of training.
Hand Washing Education - Hand washing technique and effectiveness will be taught in a fun, “hands-on” learning experience with the use of black light sensitive lotion (such as Glo-Germ or Glitterbug lotions) and a black light.
ENP/EFNEP -Food Safety - ENP/EFNEP clients receive 15% of their education on food safety topics. These lessons vary by county in accordance with client needs.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Demonstrations • Education Class • One-on-One Intervention • Group Discussion • Workshop	• Newsletters • Public Service Announcement • Web sites • TV Media Programs

3. Description of targeted audience

Just in Time Food Safety Information Consumers who need specific information to keep food safe or to avoid risky foods (for example, consumers who call extension offices with questions about food preservation, food storage, etc).Specific groups of consumers who benefit from targeted food safety information (for example, seniors, parents of young children, volunteers who cook for groups who call extension offices with specific questions) .Consumer Food Safety Programs Consumers who need general and specific information to keep food safe or to avoid risky foods (Programs can cover a variety of topics, requested, for example, using slow cooker safely, preserving foods safely, storing food safely, using labels to avoid allergic reaction, etc).Specific groups of consumers who benefit from a targeted food safety program: for example, senior centers, parents of young children, caregivers of children, volunteers who cook for groups.Food Industry Assistance Idaho citizens interested in developing and marketing a food product.Food companies needing assistance with implementation of food safety systems, such as HACCP.Food Safety Advisor/Master Food PreserverConsumers with particular interest in home food preparation and food safety topics (particularly food preservation and food storage) and in sharing the knowledge with others.Food Service Food Safety TrainingHigh school students in foods classesAdult food service workersHand washing Education Elementary age children.Families and children at County Fairs.Adults at health fair settings.ENP-EFNEP Food Safety limited income families receiving food stamps or eligible to receive food stamps (27 counties)limited income families with children (4 counties)

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	9222	0	14160	0
2009	9222	0	14160	0
2010	9222	0	14160	0
2011	9222	0	14160	0
2012	9222	0	14160	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 1 **2009 :** 0 **2010 :** 1 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	1	2
2009	1	2
2010	1	2
2011	0	2
2012	1	2

V(H). State Defined Outputs

1. Output Target

- Number of food safety calls answered.

2008 :4075 **2009 :**4075 **2010 :** 4075 **2011 :**4075 **2012 :**4075

- Consumer food safety classes taught.

2008 :69 **2009 :**69 **2010 :** 69 **2011 :**69 **2012 :**69

- food safety presentations in other classes.

2008 :45 **2009 :**45 **2010 :** 45 **2011 :**45 **2012 :**45

- Food industry consults.

2008 :35 **2009 :**35 **2010 :** 35 **2011 :**35 **2012 :**35

- Number of certified Food Safety Advisors (MFPs).

2008 :22 **2009 :**22 **2010 :** 22 **2011 :**22 **2012 :**22

- Number of re-certified Food Safety Advisors (& MFP).

2008 :35 **2009 :**35 **2010 :** 35 **2011 :**35 **2012 :**35

- Number of volunteer hours logged by FSA/MFPs.

2008 :1360 **2009 :**1360 **2010 :** 1360 **2011 :**1360 **2012 :**1360

- Students receiving a RSFS certificate.

2008 :315 **2009 :**315 **2010 :** 315 **2011 :**315 **2012 :**315

- Participants in hand washing education programs.

2008 :10220 **2009 :**10220 **2010 :** 10220 **2011 :**10220 **2012 :**10220

- Number ENP/EFNEP graduates.

2008 :550 **2009 :**550 **2010 :** 550 **2011 :**550 **2012 :**550

- Number ENP/EFNEP one-time classes.

2008 :1650 **2009 :**1650 **2010 :** 1650 **2011 :**1650 **2012 :**1650

- Refereed journal publications

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

V(I). State Defined Outcome

1. Outcome Target

O: People use Just in Time Food Safety Information to help them make decisions about food preparation, storage, etc.I: Percentage of people who describe that they plan to use requested advice.

2. Outcome Type : Change in Action Outcome Measure

2008 :2853 **2009 :** 2853 **2010 :** 2853 **2011 :**2853 **2012 :** 2853

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: Consumer Food Safety Programs-People practice recommended food safety behaviors.I: Consumer Food Safety Programs-Program participants indicate their intentions to adopt recommended food safety practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
483	483	483	483	483

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: Food Industry Assistance-Companies have appropriate knowledge to operate food safe businesses.I: Number of companies that achieve licensing.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	2	2	2	2

3. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: Food Safety Advisor/Master Food Preserver-Knowledgeable citizens volunteer to help others learn and adopt safe food practices.I: Number of certified Food Safety Advisors and Master Food Preservers.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
57	57	57	57	57

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: Food Service Food Safety Training-High school students are prepared to work in food service jobs.I: Number of students passing the RSFS exam and becoming certified.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
221	221	221	221	221

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service

1. Outcome Target

O: Hand Hygiene Education-People will practice improved hand hygiene for reduction of colds, flu and foodborne illness.I: Hand Hygiene Education-Program participants indicate their intention to adopt recommended health practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
9198	9198	9198	9198	9198

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	2	2	2	0

3. Associated Knowledge Area(s)

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: Other scientists are aware of our research findings.
I: Number of refereed scientific journal articles.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	2	2	2	0

3. Associated Knowledge Area(s)

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: ENP-EFNEP Food Safety-Low income family members will practice safe food behaviors.I: Percentage of EFNEP graduates reporting intent to adopt practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
385	385	385	385	385

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

O: ENP-EFNEP Food Safety-Low income family members will practice safe food behaviors.I: Number of one-time ENP participants reporting intent to adopt practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1320	1320	1320	1320	1320

3. Associated Knowledge Area(s)

- 504 - Home and Commercial Food Service
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Appropriations changes
- Populations changes (immigration,new cultural groupings,etc.)
- Natural Disasters (drought,weather extremes,etc.)
- Competing Programatic Challenges
- Competing Public priorities
- Government Regulations
- Public Policy changes

Description

The research planned by this team requires significant funding from federal, state, and industry sources. Interruption or reduction in funding will significantly impact the outcomes of this work. In addition, advances in technology, could significantly alter experimental planning and lead to more rapid advances in our knowledge with additional unpredicted outcomes.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- After Only (post program)

Description

Food Service Food Safety TrainingObservational Study of Student Behavior: The Team planned an evaluation for Ready, Set Food Safe. Desired Outcomes: Improved food safety behaviors in high school students who have taken Ready, Set Food Safe.Indicators Used to Document Change: Observed behavior of high school students in foods lab.Overall Method: FCS Educators who teach RSFS in high schools will evaluate student behavior in the students' foods lab after completing RSFS. This will be completed over 2 years with data collected on about 30 subjects per year. Data collected will also include length of time post RSFS instruction, length of lab, length of time used to teach RSFS. Observations of a Control Group (foods lab students who have not have RSFS training) will also be conducted. The timeline is to plan the project in Year 1, collect data in Years 2 and 3, and write up the results in Year 4.Data on Students Who Work in Food Service: Desired Outcomes: A secondary evaluation will involve the longer term outcome of whether students who have taken Ready, Set Food Safe in high school are working in food service.Indicators Used to Document Change: An approach is to follow-up students who have taken RSFS one year post high school graduation to find out if they have worked in food service. Another approach is to contact food establishment managers and ask whether they require certification of all employees or if for some employees, which positions it is required for.Overall Method: Interested Team members will be asked to form a committee to develop the experimental protocol for this work during 2006.Food Safety Advisor/Master Food PreserverSome Team members expressed interest in evaluating Food Safety Advisor/Master Food Preserver, although a useful plan was not developed (the problem is what to use as a Control Group). Perhaps we could ask other states if/how they have evaluated their MFP program

2. Data Collection Methods

- Journals
- Mail
- Observation
- Telephone
- Tests

Description

Observational Study of Student Behavior: FCS Educators who teach Ready, Set Food Safe in high schools will evaluate student behavior of 4 randomly selected students per observer. Observation data will be collected in the students' foods lab 4 weeks after completing RSFS. (Note: 4 weeks after RSFS is the target; data will be accepted from observations completed 2-8 weeks after RSFS.) The student behavior checklist (19 behaviors) developed for the Food Safety Music Project will be the instrument used. This will be completed over 2 years with data collected on about 30 subjects per year. Criteria for subjects is Junior or Senior in high school or older. Data collected will also include length of time post RSFS instruction, length of lab, length of time used to

teach RSFS. The Case Study tool will also be used. Observations of a Control Group (foods lab students who have not have RSFS training) will also be conducted (fewer students would be needed, perhaps 20 subjects per year). Data on Students Who Work in Food Service: A committee to develop the data collection methods for this work will be formed. One approach may be to follow-up students who have taken RSFS one year post high school graduation to find out if they have worked in food service. Another approach is to contact food establishment managers and ask whether they require certification of all employees or if for some employees, which positions it is required for.Food Safety Advisor/Master Food Preserver: Possible data collection techniques for an evaluation of this program will be discussed among Team members to determine what is feasible.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Forages

2. Brief summary about Planned Program

The Idaho Forage team plans for activities in general categories of pasture management, alfalfa production and management, and alternative forages. The forage team is well integrated between plant, animal, and natural resource disciplines. However, the result of this integration is less faculty assignments, poor funding, and a lack of strong "commission" status although the numbers of stakeholders are more numerable than any other commodity.The needs for research, extension education, and professional development are great. The opportunities to motivate clients to improve sustainability and profitability are enormous. This document outlines planned activities and evaluation of the performance for the next five years.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 203 20% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 30% Plant Product Quality and Utility (Preharvest)
- 205 40% Plant Management Systems
- 215 10% Biological Control of Pests Affecting Plants

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

AlfalfaIdaho produced 5M tons of alfalfa in 2002, and ranked 3rd in the US. In Idaho, 93% of alfalfa is produced under irrigation on 79% of the acreage. Emerging and continuing issues include:Increasing pest and disease pressure, including new pests and conditions that favor established pests;Shortage of irrigation water and competition with other crops and domestic uses;Rising input expenses primarily related to increased fossil fuel costs;Impact of changing production practices on yield and quality issues.Pastures11.7M acres of Idaho are privately owned grazing land. Of this, 1.3M acres are domestic pastureland which produce 50% of their potential. Continuing and emerging issues are:Producers and the public have not recognized the ecological value of pastures for carbon sequestration, nutrient cycling and solar energy capture and conversion to food.Operators don't recognize that pasture degradation is the result of failure to leave adequate residuals to protect the health and vigor of desirable species and enhance ecosystem servicesPoor grazing practices result in increased invasive and noxious weedsLivestock operators lack skills and motivation to apply advanced grazing methodsBecause of poor productivity and increased expenses, livestock operators are leaving the business and rural communitiesIncreasing numbers of former urban residents are moving to rural environments where they often have unreasonable biological expectations and do not understand the environmental and social issues.Other Harvested ForagesFarmers and ranchers are interested in less traditional forage crops and the use of traditional species in non-traditional ways to complement existing production systems, extend other resources, or improve profitability. Emerging and continuing issues include:Shortage of irrigation water and competition (for water) with other crops and domestic uses. Extending the grazing season by growing forages that can be harvested in the non-growing season by livestock instead of by machinery.Lack of knowledge of agronomic practices related to non-traditional crop species and non-traditional use of traditional crops; example may include iIncreasing double-cropping to improve profitability.Understanding negative quality factors in traditional and non-traditional forages such as high nitrates and prussic acid.Faltering agronomic knowledge in the face of drastically increasing production of corn silage for the commercial dairy industry

2. Scope of the Program

- Multistate Research
- Multistate Integrated Research and Extension
- In-State Extension
- Integrated Research and Extension
- In-State Research
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Logic Model:Farmers and ranchers need up-to-date information in order to sustainably produce forages that support the Idaho livestock industries. In order for farmers and ranchers to obtain up-to-date information on production (varieties, tillage, fertility, planting, irrigation), crop protection (identification and scouting for new and existing pests, management and treatment), harvesting (mechanical harvesting and grazing) and storage (mechanical shelters, stockpiling and animal energy banking) the information must be available. In order for the information to be available applied research and demonstration projects must be undertaken to validate data from other areas and to develop locally appropriate information. In order for the information to be transferred to operators, extension educators and specialists need to be educated about the results of research and demonstration and then present, classes, workshops, tours, write articles, develop web sites and other publications that reach operators. Operators will adopt new, more sustainable practices, if they are convinced, though education, demonstration and personal consultation that the practices are economically advantageous and appropriate to their situation, Resources:Idaho does not have enough extension and research faculty to provide adequate forage support necessary for farmers and the Idaho livestock industries.Knowledge Base:There is a large base of research information on conventional and non-conventional forage production and harvesting that has never been updated or validated under Idaho conditions.Learning PatternsWe believe that clients become aware of improved practices by reading articles and attending presentations, etc. Clients learn about improved practices by attending workshop, classes and tours. And we believe that clients implement improved practices when they become convinced that the practices will work in their situation are in their economic interest through workshops, tours and demonstrations.

2. Ultimate goal(s) of this Program

The long-term goals of this project are to help operators identify and implement forage production and management practices that are economically profitable, ecologically sustainable and socially acceptable.AlfalfaClients will have up-to-date pest and disease management information to provide improved sustainability for forage production.Clients will have integrated approaches between center-pivot irrigation and alfalfa harvest that permit improved yield and quality of alfalfa produced using these irrigation systems, while providing improved water use efficiency.Clients will be able to identify and implement management practices on their operations that maintain or reduce production costs while maintaining or improving alfalfa production and quality.Clients will be able to identify and manage net effects of changes in production practices that result in changes in yield and quality, and consequently profitability. PasturesPasture operators and the public will recognize the potential of irrigated pastures to provide ecosystem services such as carbon sequestration, nutrient cycling and solar energy captureOperators will recognize that pasture degradation is the result of failure to leave adequate post-grazing residual and will modify practices to leave adequate plant residual to encourage desirable species, discourage undesirable and noxious species and enhance ecosystem processes.Livestock and pasture operators will have the necessary knowledge and will implement advanced irrigated pasture management skills.The number of sustainable large and small irrigated pasture operators will increase.Other Harvested ForagesPasture and livestock operators will be able to utilize forages in the non-growing season to reduce the cost of livestock production and improve the efficiency of nutrient cycling.Farm Clients will be able to evaluate and implement the use of alternative crops to reduce their demand for irrigation water when necessaryFarm and pasture operators will have the agronomic knowledge necessary to produce non-traditional crops and use traditional crops in non-traditional ways, including double-cropping, ecologically and economically effectively.Producers and uses of non-traditional forages will understand what production practices contribute to negative quality factors and will understand how to mitigate negative quality factors to produce and utilize these crops effectively and economically.Idaho field corn grain and silage producers will have locally accurate information for the production of these crops.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.2	0.0	0.2	0.0
2009	2.2	0.0	0.2	0.0
2010	2.2	0.0	0.2	0.0
2011	2.2	0.0	0.2	0.0
2012	2.2	0.0	0.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Irrigated PasturesDevelopment of a curriculum package that presents a coordinated and consistent set of concepts for domestic pasture management under Idaho conditions. At least one 4-day hands-on MiG workshop at the Nancy M. Cummings Research Extension and Education Center. Pasture management classes and tours:Plant material trial at the Nancy M Cummings Research Extension and Education Center Develop a grant proposal to support research and demonstration projects on the NMCREEC to investigate the practicality of early summer calving, stockpiling and other methods to match animal nutrient needs to available feed resources at the lowest possible costDevelopment of a curriculum for and "Advanced Grazing Academy”Implement ranch scale power fencing demonstration(s) (NMREEC)Continue development of a "summer calving" herd (NMCREEC) to research energy sensitive managementWeb site with links to other related grazing sitesWeb site with listing of resourcesPhysical archive/library for MiG related grazing related research and extension materialsPublication on paper and on the web site of literature search related to grazing systemsList server that permits experienced and novice MiG practitioners to interact over long distances.Pasture walks (tours) on novice and established practitioner's operations to assist operators in developing innovative ways of solving grazing problems. Ranch scale livestock water development demonstration(s)Ranch scale comparison of conventional management to energy sensitive managementResearch/demonstrations into alternative methods of wintering including annual and perennial pasture and crops for stock piling and alternative calving seasons to match grazing energy resources to livestock nutrient demands with a minimum of mechanically harvested feed.Demonstrations of improved nutrient cycling from MiG managed pastures vs. continuous useProduce popular articles, CIS's, bulletins and other literature describing management techniques and outlining reasonable expectations for pasture performance.Develop curricula in cooperation with extension specialist in other western states for an “Intensive Pasture” workshop (Shewmaker, et al)Complete and analyze survey of alumni of the Lost River Grazing Academy

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• One-on-One Intervention • Workshop • Demonstrations	• TV Media Programs • Web sites • Newsletters

3. Description of targeted audience

Positive ImpactsProducers (Livestock and Forage)Livestock and forage producers are likely to be positively impacted by new and improved production practices that will improve their profitability and ecological sustainabilitySeed ProducersAlfalfa and grass seed producers are likely to be positively impacted as many improved practices may involve the planting of new varieties with high productivity and pest resistanceAllied Industry SuppliersSupplies of a variety of production input are likely to be positively impacts since improved practices may include the use of new materials, machinery or other production inputs.Small Acreage Land OwnersSmall acreage land owners will have a great understanding of the biology of their land and livestock resources, and will be less likely to be impacted by weed invasion or be taken advantage of by unscrupulous input suppliersNegatively ImpactedAllied

IndustriesSome supplies of fuel or fertilizer or other inputs heavily dependent on fossil fuel may find their sales reduced if recommend practices are implemented.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	990	1115	156	40
2009	990	1115	151	40
2010	990	1115	151	40
2011	990	1115	151	40
2012	1000	1200	160	50

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0 **2009 :** 0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	3
2009	0	3
2010	0	4
2011	0	3
2012	0	3

V(H). State Defined Outputs

1. Output Target

- Demonstrations.

  2008 : 5 **2009 :** 5 **2010 :** 3 **2011 :** 3 **2012 :** 3

- Extension educators trained.

  2008 : 13 **2009 :** 10 **2010 :** 10 **2011 :** 10 **2012 :** 10

- Extension Publications (peer reviewed; e.g., CIS).

  2008 : 3 **2009 :** 3 **2010 :** 4 **2011 :** 3 **2012 :** 3

- Grants.

  2008 : 1 **2009 :** 0 **2010 :** 0 **2011 :** 2 **2012 :** 2

- Media Interview Articles.

2008 :9 **2009 :**8 **2010 :** 7 **2011 :**7 **2012 :**7

- Operator Posters.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- Operator Presentations.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- Papers.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Popular Press articles.

2008 :14 **2009 :**14 **2010 :** 12 **2011 :**12 **2012 :**10

- Poster Papers.

2008 :3 **2009 :**4 **2010 :** 3 **2011 :**3 **2012 :**2

- Presentations.

2008 :18 **2009 :**19 **2010 :** 21 **2011 :**19 **2012 :**20

- Professional Education Opportunity.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**0

- Research Papers.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Research Presentations.

2008 :4 **2009 :**3 **2010 :** 4 **2011 :**3 **2012 :**2

- School (group of related presentations).

2008 :8 **2009 :**8 **2010 :** 8 **2011 :**8 **2012 :**8

- Tour (Guided tour of producers practices).

2008 :9 **2009 :**9 **2010 :** 9 **2011 :**9 **2012 :**6

- Workshops (Multi-day educational activity).

2008 :12 **2009 :**12 **2010 :** 12 **2011 :**12 **2012 :**10

V(I). State Defined Outcome

1. Outcome Target

O: Clients will become aware of new or preferred production practicesI: Number of clients attending schools.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
335	332	332	307	307

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 215 - Biological Control of Pests Affecting Plants

1. Outcome Target

O: Clients will adopt new or preferred production practices.I: Percentage of clients indicating in post- surveys that they intend to implement recommended practices.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	21	22	22	22

3. Associated Knowledge Area(s)

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 215 - Biological Control of Pests Affecting Plants

1. Outcome Target

O: Clients gain improved understanding of production and harvesting principles and practices.I: Percent of clients who demonstrate improved knowlege in pre- and post- testing

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	47	46	37	37

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 215 - Biological Control of Pests Affecting Plants

1. Outcome Target

O: Clients will become aware of new or preferred production practicesI: Number of popular press articles and interview articles published

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
14	14	12	12	12

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 215 - Biological Control of Pests Affecting Plants

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Appropriations changes
- Natural Disasters (drought,weather extremes,etc.)
- Competing Programatic Challenges
- Economy

Description

Only 1 scientist year is assigned to work on forages in Idaho. There is no commodity commission to fund research.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- After Only (post program)
- Time series (multiple points before and after program)
- Case Study

Description

Irrigated Pasture Management: Survey of former participants in Lost River Grazing Academy to determine practice adoptions and change in conditions; Pre- and post testing of participants in workshops to determine increase in knowledge and understandingNumber of people attending winter UI extension classesSurvey of forage test labs and livestock producers

2. Data Collection Methods

- Tests
- Case Study
- Mail

Description

Irrigated Pasture: Participants in workshops will be give pre- and post - tests on knowledge and practices to determine increase in comprehension of principles and practices; Selected participants in the LRGA may be utilized in developing case studies for the implementation of grazing practices and principles; Participants in the LRGA will receive a mail survey a period after participation to determine changes in practices and performance.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Forest Management

2. Brief summary about Planned Program

Our structure is aligned with three primary audiences: family forest owners, loggers, and natural resource professionals (recognizing that individual workshops, publications, etc. produced by this team will reach a combination of these groups as well as other groups.) Over 41% of Idaho is forested. Approximately 11% of forests (2.3 million acres) belong to family forest owners (also called “non-industrial private forest owners” or “NIPF” owners). In some areas, the percentage of family forestland is much higher (e.g., 44% of all forested land in the panhandle counties is owned by family forest owners).Family forest acreage in Idaho has increased by 100,000 acres, due in part to former pasture or marginal cropland being actively planted back into trees or naturally seeding back into forest after tillage stops. The number of Idaho family forest owners has doubled, from 21,700 in 1978, to 47,400 family forest owners in 1993. Of these, 34,000 owners hold less than 10 acres, nearly 6,900 owners held between 10 and 100 acres, and 6,500 held over 100 acres. Family forest demographics are always changing, as family forestlands are bought, sold, subdivided and as industry forest lands are sold off. There are roughly 2,000 full- and part-time loggers in Idaho. Loggers are a critical link in forest management, particularly on forests whose owners are less active in directly managing their property. Unfortunately, if communication between landowners, loggers, or foresters is inadequate, the resulting timber harvests may not meet expectations. State forest practice laws remedy this somewhat, but they are designed to provide minimum criteria, and loggers may not fully appreciate the reasons these regulations were created.Forest products companies are looking for ways to improve forestry operations on their own lands and properties they buy timber from. To this end, most Idaho forest product companies are participating in the “Sustainable Forestry Initiative” (SFI), a national effort of the American Forest and Paper Association to certify sustainable management, including logging and processing, on private forest land. Among other things SFI requires logger education on forest ecology, silviculture, and water quality.There are conservatively over 500 professional foresters in Idaho working for public forest land agencies, forest industry and as consulting foresters. Foresters and other natural resource professionals must continually sharpen their skills and stay current with emerging scientific and technological developments to sustainably produce more wood fiber and simultaneously improve forest growth and health. To that end, the forestry community has established new credentials to document foresters’ continued professional development (e.g., The Society of American Foresters “certified forester” program).

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 123 90% Management and Sustainability of Forest Resources
- 216 10% Integrated Pest Management Systems

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Family Forest OwnersIdaho has some of the most productive family forests in the Rocky Mountains. Timber harvest income is rarely the sole source of income for individual forest owners. Yet in aggregate, these harvests are essential to the economies of rural natural resource-dependent communities in Idaho. On average, over 337 million board feet of timber has been harvested from these lands annually since 1991, with an estimated annual value of $135 million for mill-delivered logs, or $202 million milled. Since 1992, family forests have consistently produced 25% of Idaho’s annual timber harvest, even though they only comprise 12% of Idaho’s forest acreage. In some communities, logs from family forests are the only thing keeping local timber mills open.Most logs from family forests are processed into wood products in Idaho, supporting living wage jobs in rural Idaho communities. With most mills gearing up to take smaller logs, family forests are well positioned to continue supplying these mills, as it takes less time to produce smaller logs, especially if forest owners learn to apply sound silvicultural practices.Family forest owners have many different values for their property. To be effective, extension programs must simultaneously consider all these motivations. Poor species composition, under- or over-stocking, and related issues reduce family forests’ productivity and ecological integrity and

heighten their susceptibility to insects, disease, and fire.LoggersPartially stimulated by SFI, a statewide logger education committee developed the “Idaho Pro-Logger” program, administered through the Associated Logging Contractors of Idaho (ALC). Among other standards, the Idaho Pro-Logger credential requires participation in Logger Education to Advance Professionalism (“LEAP”), a UI Extension program that features over 20 hours of training designed to increase loggers’ understanding and skills related to forest ecology, silviculture, and water quality) and 16 credits of continuing education annually. Most Idaho forest products companies require loggers that bring logs to them to take LEAP or participate in the Idaho Pro-Logger program.Natural Resource ProfessionalsContinuing education for foresters is available through a number of sources. However, many continuing education venues do not fit the needs of individual foresters due to budget limitations, time and travel constraints, or other factors. UI Extension is uniquely situated to provide local continuing education opportunities for field foresters.K-12 teachers must also stay updated, and are continually looking for local opportunities to hone their skills . They also value research-based sources of forestry education to integrate into their classrooms.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Extension
- Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Family Forest OwnersThe large number of forest owners who have had little or no exposure to forestry results in a continuing need for education on basic forest ecology and management. One of the key challenges in programming for family forest owners is to make complex ecological and biological concepts accessible to them in forms they can readily apply on the ground. With a better working knowledge of forest ecology, silviculture, and related forest management techniques, family forest owners can sustainably produce more wood fiber and simultaneously improve forest health and growth, wildlife habitat, and other values. LoggersIf loggers understand the “spirit of the law” within forest practice act regulations, they can often modify their practices to reach forest management goals even more effectively. That is particularly critical, since increasing use of mechanized harvesting tools gives loggers more responsibility in the woods. Also, since most loggers work on many forest properties in a year, they have contact with multiple forest owners, and provide another vehicle to communicate with more family forest owners. The more loggers know about forest management, the better they can communicate with forest owners, foresters, and others involved in managing forest resources. Participating in education programs can simultaneously improve the demand for their services, and document their commitment to forest stewardship.Natural Resource ProfessionalsThe Society of American Foresters and the Association of Consulting Foresters have credential programs that require continuing education. Extension programs for family forest owners are increasingly being developed in ways to simultaneously meet the needs of natural resource professionals who work with them (and on public and industrial lands as well). There are also a diverse array of professionals working on Wildland Urban Interface or “WUI” issues. Natural resource professionals' participation in Extension programs helps them maintain their credentials and improves their skills in managing forests and other natural resources for a variety of benefits.

2. Ultimate goal(s) of this Program

Ultimately, the goal of extension programming in this topic team is to improve the skills of family forest owners, loggers, and natural resource professionals so they can improve the quality of forest management and sustain the full spectrum of benefits that that society values from forests.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	3.6	0.0	0.4	0.0
2009	3.6	0.0	0.4	0.0
2010	3.6	0.0	0.4	0.0
2011	3.6	0.0	0.4	0.0
2012	3.6	0.0	0.4	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

The following programs are likely to be offered over the next 6 years. There will also likely be other programs on topics yet to be identified.Family Forest Owners:Forestry Shortcourse (18 hours - 2-3 times annually)Current Topics in Forest Health (5 hours - twice annually)An Introduction to Conservation Easements (3 hours - 1-2 times annually) Landscaping for Fire Prevention (2 hours- once annually)Backyard Forests (2 hours - once annually)Scaling and Marketing Private Timber (7 hours - twice annually) Private Forest Landowners Workshop (14 hours - once annually)Habitat Field Day (7 hours - once annually)Thinning and Pruning Field Day (7 hours - 1-2 times annually)Forest Insects & Disease Field Day (7 hours - twice annually)Pruning for White Pine Blister Rust (7 hours - once every other year)Managing Forest Organic Debris (7 hours - once annually)Using your GPS (7 hours - twice annually)Woodland NOTES (two 4-page issues, 10,000 households)Articles in Farm Bureau Gem State Producer (10 articles - 15,000 households)Articles in Farm Bureau Quarterly (4 articles - 61,000 households)HomeWise (newspaper column distributed to 59 daily and weekly newspapers in Idaho, plus numerous radio and TV stations). Articles in Lewiston Morning Tribune (28, 000 households)After the Burn (publication) Pruning for White Pine Blister Rust (publication)Managing Organic Debris & Slash (publication) Forest Water Quality/BMP (publication)Reforesting Marginal Farmlands (publication) An Assessment of Dike Riparian Vegetation on the Northern Idaho Reaches of the Kootenai River (publication) Maples. Alternative Tree Crop Series No. 8, Idaho Forest, Wildlife and Range Experiment Station, Moscow, ID. (Publication) UI Extension Forestry web site (3,000 hits annually)Pilot web-based learning module on forest management planningLoggers:Logger Education to Advance Professionalism (20 hours - twice annually) LEAP Update (8 hours 5-6 times annually) Natural Resource Professionals:Family Foresters Workshop (6 hours - once annually) Wildland Urban Interface Conference (12 hours - once annually) Clearwater Area Educators Forestry Tour (20 hours - once annually)Clearwater County 6th grade forestry Tour (24 hours - once annually)Publications, posters and other media in journals and other venues targeted to natural resource professionals.Presentations at natural resource workshops and conferences.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Education Class • One-on-One Intervention • Group Discussion • Demonstrations • Workshop	• Newsletters • Public Service Announcement • TV Media Programs • Web sites

3. Description of targeted audience

The primary audiences for this topic team are family forest owners, loggers and natural resource professionals. They have been discussed in detail in earlier sections of this document.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	500	15000	50	200
2009	500	15000	50	200
2010	500	15000	50	200
2011	500	15000	50	200
2012	500	15000	50	200

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	2
2009	0	2
2010	0	2
2011	0	2
2012	0	2

V(H). State Defined Outputs

1. Output Target

- Number of workshops, field days, etc.

  2008 :30 **2009 :**30 **2010 :** 30 **2011 :**30 **2012 :**30

- Number of participants in workshops, field days, etc.

  2008 :750 **2009 :**750 **2010 :** 750 **2011 :**750 **2012 :**750

- Number of articles in popular press.

  2008 :15 **2009 :**15 **2010 :** 15 **2011 :**15 **2012 :**15

- Number of web site "hits".

  2008 :3000 **2009 :**3000 **2010 :** 3000 **2011 :**3000 **2012 :**3000

- Number of new or revised Extension publications (peer reviewed).

2008 :2 **2009 :**2 **2010 :**2 **2011 :**2 **2012 :**2

- Continuing Education hours for foresters, loggers, & other natural resource Professionals.

2008 :2000 **2009 :**2000 **2010 :**2000 **2011 :**2000 **2012 :**2000

V(I). State Defined Outcome

1. Outcome Target

O: Family forest owners manage resources to achieve healthy, sustainable forests.I: Numbers of family forest owners indicating they will adopt recommended practices (e.g., monitor for insect, disease, or animal damage; thin forest trees; complete a forest management plan; etc.).

2. Outcome Type : Change in Condition Outcome Measure

2008 :300 **2009 :** 300 **2010 :** 300 **2011 :**300 **2012 :** 300

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Family forest owners' understand issues and practices related to forest ecology, silviculture, and forest management.I: Number of family forest owners participating in educational programs who report an increase in awareness and knowledge of specific forest ecology, silviculture, and forest management issues.

2. Outcome Type : Change in Condition Outcome Measure

2008 :300 **2009 :** 300 **2010 :** 300 **2011 :**300 **2012 :** 300

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Loggers operate using recommended forest management practices (e.g., monitor for insect, disease, or animal damage).I: Numbers of LEAP Update participants indicating they will adopt specific improved forest management practices.

2. Outcome Type : Change in Condition Outcome Measure

2008 :230 **2009 :** 230 **2010 :** 230 **2011 :**230 **2012 :** 230

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Loggers possess credentials required by forest industry to conduct business.I: Number of loggers who complete continuing education requirements.

2. Outcome Type : Change in Condition Outcome Measure

2008 :250 **2009 :** 250 **2010 :** 250 **2011 :**250 **2012 :** 250

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Natural resource professionals have knowledge consistent with current scientific understanding and emerging technologies.I: Number of natural resource professionals demonstrating increase in knowledge related to specific forest science and technology topics.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
250	250	250	250	250

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Other scientists are aware of our research findings.
I: Number of refereed scientific journal articles.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1	1	1	1	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	2	2	2	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 216 - Integrated Pest Management Systems

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations
- Natural Disasters (drought,weather extremes,etc.)
- Public Policy changes
- Appropriations changes

Description

New threats that threaten forest health (e.g., an insect or disease epidemic) could shift the emphasis of this topic team. Continued receipt of grant funds from the Idaho Forest Stewardship program is also essential to the completion of many of the programs described in this plan. Continued or increased funding from the Renewabale Resources Extension Act (RREA) funding is also critical to several activities described in this plan.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Description

Nearly all the programs described in this document feature some type of exit evaluation that collects data on forest acres owned or managed, previous participation in specific forestry education or assistance programs, whether they plan to implement improved management practices as a result of attending the program, a retrospective rating of their knowledge of the program material before and after the program, and topics they recommended for future programs. Forest stewardship programs and their effectiveness are also evaluated informally by the Idaho Forest Stewardship Advisory Committee and the Idaho Forest Owners Association.In 2006 we will finalize the results of a survey of over 450 people who attended the Forestry Shortcourse since 1992. The program consists of six 3-hour sessions designed to coach forest owners in the development of a forest management plan for their property, through training on forest ecology, silviculture, wildlife habitat, forest management planning, and related topics. Participants were asked a variety of questions. In particular they were asked about their implementation of a variety of improved forest management practices and the degree to which they shared this information with other forest owners. The results of this survey should be transferrable to later participants in this program as well. Additional evaluation of the effectiveness of logger education programs will come from annual meetings with the Idaho Association of Logging Contractors (ALC), Idaho Department of Lands Forest Practice Advisors, The Idaho Sustainable Forestry Initiative State Implementation Committee, and the Idaho Statewide Logger Education Committee. We may seek funding to do a formal evaluation of the long term impacts of the LEAP program as well.

2. Data Collection Methods

- Mail
- Observation
- On-Site

Description

Family Forest OwnersStakeholder input for family forest owners is from exit evaluations of previous programs, from the Idaho Forest Stewardship Advisory Committee, and meetings. The most recent meeting with the IFOA was held in November, 2005 (see results in notes section of this document) Some of the needs identified by the IFOA may be outside the purview of Extension programs to impact meaningfully (e.g., creating new markets). Others are addressed by existing programs that will be continued. We will likely meet again with the IFOA to do similar needs assessment during the next 6 years. Needs assessment for Extension efforts with family forest owners is supplemented by comments from exit evaluations. Direction for these programs is also solicited from County Commissioners.LoggersThe primary source for needs assessment for logger education has been local logger steering committees, which meet annually. They support the continuation of LEAP, and provide annual guidance on content for LEAP Update programs and other Extension programs. Needs assessment for loggers has also been provided by the Idaho Logger Education Steering Committee, which meets twice annually. They have indicated they want to see us continue to offer LEAP and allied programs. The Idaho State Implementation Committee for the Sustainable Forestry Initiative also provides input to Extension programs for loggers and family forest owners. They have supported the continuation of LEAP and allied programs as well. Needs assessment for Extension efforts with loggers is supplemented by comments from exit evaluations.Natural Resource ProfessionalsNeeds assessment for Extension efforts with natural resource professionals and been primarily from direct interaction with those professionals. These efforts are supplemented by comments from exit evaluations of annual programs targeted to this audience, such as the Family Foresters Workshop. Additional input is from various groups that have a stake in specific programs, For example the Kootenai County Wildland Urban Interface Task force and similar groups provide input on the Inland Northwest Wildland Urban Interface Conference.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Health and Human Nutrition

2. Brief summary about Planned Program

This program encompasses research and extension faculty members within several academic departments including Family & Consumer Science (FCS), Food Science and Toxicology (FST), and Microbiology, Molecular Biology, and Biochemistry (MMBB), as well as county-based Extension educators.

FCS Programs: FCS research and extension faculty developed 11 projects that cover four main areas. The first area focuses on teaching nutrition and health classes to underserved populations; the three projects in this area include Extension Nutrition Program (ENP), Expanded Food and Nutrition Education Program (EFNEP), and Senior Extension Nutrition Program (SENP. The second area focuses on general nutrition and health topics; the four projects in this area include: Meal Time In Less Time, Got Calcium, MyPyramid/Dietary Guidelines, and Miscellaneous Health and Nutrition Topics. The third area focuses on classes conducted on specific health topics and the three projects include: diabetes, osteoporosis, overweight and obesity intervention. The fourth area contains one project and focuses on factors influencing food intake of young children.

FST and MMBB Programs: Researchers in these departments conduct basic and applied research to address a variety of disease processes including infectious diseases, developmental disorders, congenital diseases, and cancer. These research programs study the molecular and cellular aspects of disease formation and develop mechanisms for intervention or prevention. Another key focus is the study of how agricultural practices and commodities can contribute to, or help prevent, certain diseases. In these cases a key goal is to generate and test plant varieties that allow the safest possible agricultural practices and maximally promote a healthy and nutritious diet.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 206 5% Basic Plant Biology
- 301 10% Reproductive Performance of Animals
- 311 10% Animal Diseases
- 701 10% Nutrient Composition of Food
- 703 35% Nutrition Education and Behavior
- 722 10% Zoonotic Diseases and Parasites Affecting Humans
- 723 10% Hazards to Human Health and Safety
- 724 10% Healthy Lifestyle

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Infectious diseases and other illnesses associated with genetics, socioeconomic conditions, diet and environmental exposures continue to be significant causes of morbidity and mortality in the US and worldwide. In addition, new threats are now realized to result from potential exposure to biosecurity agents or emerging diseases such as the avian influenza and SARS. There is a significant need to obtain a better understanding of the molecular and cellular basis of diseases as well as the social and cultural conditions associated with certain disease risk factors. Once these factors are better understood, it will be possible to prevent certain diseases or to intervene with novel therapies that reduce disease impact.

Many Americans do not follow the 2005 Dietary Guidelines for Americans which recommends: (1) consumption of more nutrient-dense foods such as fruits, vegetables, whole-grains, beans, low-fat dairy and meat products and (2) being physically active. A food survey called The National Health And Nutrition Examination Survey (NHANES) conducted in 1999-2000 revealed that 30 percent of calories that Americans consume come from nutrient poor foods such as sweets and deserts, soft drinks, alcoholic beverages, salty snacks and fruit-flavored drinks. In addition, a survey published by the Centers for Disease Control and Prevention in 2004 revealed that Americans are consuming more calories today than they were 30 years ago. The average calorie

intake for men increased by 168 calories, from 2450 calories in 1971 to 2618 calories in 2000. The average calorie intake for women increased by 335 calories, from 1542 calories in 1971 to 1877 calories. The government recommends about 1600 daily calories for women and 2200 for men, and more for active people. The CDC Physical Activity Statistics 2003 report revealed that less than half of Americans (46 %) are considered "physically active," which is defined as participating in 30 minutes of moderate intensity physical activity five times a week. The combination of an inadequate diet, excess calorie intake, diet and limited physical activity is linked to development of certain diseases, such as heart disease, diabetes, osteoporosis plus being either overweight or obese. Many underserved populations do not have the resources available to them to address to health and nutrition issues and may be especially susceptible to consuming an inadequate diet and being physically inactive. Priorities for the Health and Nutrition Topic Team are to:
increase awareness of health and nutrition programs available to adult and youth Idahoans.
teach adults and youth basic nutrition classes that focus on the 2005 Dietary Guidelines for Americans and MyPyramid and promote physical activity.
teach adults nutrition and/or physical activity components of diabetes, osteoporosis and overweight and obesity.
understand the molecular and cellular basis of certain key infectious diseases or other types of diseases affecting Americans.
develop new methods of preventing or treating diseases.
develop new plant varieties that minimize the need to introduce chemicals in our food supply.
develop new plant varieties that provide enhanced nutritional benefits to consumers.

2. Scope of the Program

- Multistate Integrated Research and Extension
- Integrated Research and Extension
- Multistate Research
- Multistate Extension
- In-State Extension
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Obtaining a better understanding of the molecular and cellular aspects and the social and cultural conditions associated with some diseases will lead to improved prevention and treatment. Recent scientific advances in the fields of molecular biology, genomics, proteomics will greatly increase the pace at which we enhance our knowledge of disease mechanisms. New plant (potato, grains, and oil crops) varieties will continue to be developed at the pace we have observed over the past five years. If adults and youth complete a series of nutrition classes that include physical activity messages, then they will show an increase in knowledge and positive changes in their eating habits and level of physical activity. If adults and youth attend a single class on nutrition or physical activity, then they will increase their awareness and/or knowledge of the topic.

2. Ultimate goal(s) of this Program

FCS: Short-term goals include changes in knowledge, attitude, motivation, and awareness. Changes in knowledge or attitude or motivation will be measured in two projects: Meal Time In Less Time, and Overweight and obesity intervention. Awareness will be measured by number of participants that attend classes in all the projects.Medium-term goals include changes in behavior. Changes in behavior will be measured in six projects: Extension Nutrition Program, Senior Extension Nutrition Program, Expanded Food and Nutrition Education Program, Overweight and Obesity Interventions, Diabetes Pedometer Project, and Dietary Guidelines/MyPyramid. Changes in physical measurements will be collected in two projects: Overweight and Obesity Intervention and Diabetes.Long-term (impacts) - changes in ecological, environmental, social conditions. None will be measured.
MMBB and FST: This component of the Topic Team will focus on basic and applied research. The ultimate goals center on obtaining increased knowledge of the molecular and cellular basis of diseases, including but not limited to, the interactions of microbes, their products, and other molecules with humans. Ultimately, this work will lead to new vaccines and therapies for diseases under investigation.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	4.5	0.0	7.4	0.0
2009	4.5	0.0	7.4	0.0
2010	4.5	0.0	7.4	0.0
2011	4.5	0.0	7.4	0.0
2012	4.5	0.0	7.4	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

ENP: Conduct 60 classes on MyPyramid to 600 adult participants.EFNEP: Adults: Conduct 100 classes on MyPyramid to 600 adult participants; Youth: Conduct 300 classes on MyPyramid to 4,000 youth participants.SENP: Conduct 335 nutrition classes to 350 seniors.Diabetes: Conduct 22 classes to 295 adults.Overweight/Obesity Intervention: Conduct 24 classes (Steps To A New You) to 330 adults.Meal Time In Less Time: Conduct 23 classes to 220 adults.Osteoporosis: Conduct 4 classes to 60 adults.Got Calcium?: Conduct 45 classes to 1000 youth.MyPyramid/Dietary Guidelines: Conduct 23 classes to 670 adults; Conduct 35 classes to 1043 youth.Miscellaneous Health and Nutrition: Conduct 15 classes to 190 adults.Factors Influencing Food Intake of Young Children: Observe food habits of young children.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Education Class • Demonstrations • One-on-One Intervention • Group Discussion • Workshop • Other 1 (Observational)	• TV Media Programs • Newsletters

3. Description of targeted audience

The target audience will be individuals with an interest in or need for health and nutrition information. These individuals will attend classes on nutrition and/or health, and some will complete evaluation forms (surveys, etc) to determine impact of these classes.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	3335	3000	6100	6000
2009	3345	3000	6150	6000
2010	3355	3000	6200	6000
2011	3365	3000	6250	6000
2012	3375	3000	6300	6000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :1 **2009 :**0 **2010 :** 1 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	0
2009	2	0
2010	2	0
2011	2	0
2012	2	0

V(H). State Defined Outputs

1. Output Target

- Conduct classes on nutrition and health and physical activity.

  2008 :1000 **2009 :**1010 **2010 :** 1020 **2011 :**1030 **2012 :**1040

- Extension publications (peer reviewed; CIS, Bulletins, etc)

  2008 :1 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Submit refereed journal articles.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Submit other publications (non-peer reviewed).

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

O: People have increased awareness of the importance of nutrition, health, and physical activity.I: Number of participants in nutrition and health classes.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
550	600	650	700	750

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

1. Outcome Target

O: Change in level of physical activity of individuals enrolled in a walking or resistance activity program.I: Number of individuals who changed their daily steps or increased their weights (resistance activity).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	100	150	200	250

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

1. Outcome Target

O: Adult ENP participants will plan to change a dietary or activity behavior after completing a nutrition or physical activity class.I: Number of adult ENP participants who indicate their intention to improve their diet or physical activity.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
350	375	400	425	425

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 724 - Healthy Lifestyle

1. Outcome Target

O: Approximately 87% of Adult EFNEP participants will improve their diets after completing 6 core lessons.I: Number of adults that improve their diets by at least one food group (determined through pre/post 24 hour recalls).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
330	330	330	330	330

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

1. Outcome Target

O: Steps To A New You participants will change their attitude toward body image, eating, and physical activity.I: Number of Steps To A New You participants that show improved attitude (through pre, post, and follow-up surveys).

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

1. Outcome Target

O: Kalispel children will improve their eating habits.I: Number of children changing their calorie, protein, fat, and vitamin intake.

2. Outcome Type : Change in Action Outcome Measure

2008 : 35	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 : 3	**2009 :** 3	**2010 :** 3	**2011 :** 3	**2012 :** 0

3. Associated Knowledge Area(s)

- 206 - Basic Plant Biology
- 301 - Reproductive Performance of Animals
- 311 - Animal Diseases
- 701 - Nutrient Composition of Food
- 703 - Nutrition Education and Behavior
- 722 - Zoonotic Diseases and Parasites Affecting Humans
- 723 - Hazards to Human Health and Safety
- 724 - Healthy Lifestyle

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Populations changes (immigration,new cultural groupings,etc.)
- Competing Public priorities
- Economy
- Public Policy changes
- Competing Programatic Challenges

Description

External factors that affect the success of a program include: (1) changing demographics, (2) economics and (3) federal factors. Demographic changes in Idaho include an increase in the Hispanic population. In order to effectively reach this audience, relationship must first be developed so they will attend programs, and then the programs that are developed must be culturally appropriate. Economic conditions include limited employment of extension personnel and partners to conduct classes, the high gas prices affecting attendance at meetings, and federal budget cuts to federal food assistance programs such as the food stamp program and food bank inventories. At the federal level, there is a discussion of faith-based and community organizations partnering with the Federal Government. Some faith-based charities may be competing for public dollars to provide public services. Youth programs on nutrition and physical activity will be affected since each school district needs a healthy lifestyle plan for both students and employees. Plan by January 2006, implemented Jan. 2007. They will be contacting extension for assistance. The research planned by this team requires significant funding from federal, state, and industry sources. Interruption or reduction in funding will significantly impact the outcomes of this work. In addition, advances in technology, could significantly alter experimental planning and lead to more rapid advances in our knowledge with additional unpredicted outcomes.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Other (Paired control)
- Before-After (before and after program)
- During (during program)
- Retrospective (post program)
- After Only (post program)

Description

Project 1: ENP: Record number of participants and classes.Planned behavior survey completed at the end of each class that has participants decide on which one behavior they plan to implement as a result of taking the class.Retrospective survey: completed by individuals who take 6 core classes. This measures changes in fruit, vegetable, and low fat food intake plus reading food labels.Project 2: DiabetesRecord number of participants and classes.Record changes in level of physical activity by recording daily steps, using a pedometer.Submit diabetes research article on The Healthy Diabetes Plate.Project 3: EFNEPRecord number of participants and classes.Adults: record changes in eating behaviors, using pre/post food recalls.Youth: record changes in soda consumption and eating breakfast.Project 4: SENPRecord number of participants and classes.Have adults complete pre/post survey and determine if there is a change in their ability to manage their health as a result of taking SENP classes.Project 5: Meal Time in Less TimeRecord number of participants and classes.Work on evaluation tool.Project 6: Miscellaneous Health and Nutrition ProjectsRecord number of participants and types of classes conducted.Project 7: OsteoporosisRecord number of participants and classes conducted.Project 8: Got Calcium?Record number of participants and classes conducted.Publish curriculum.Submit research article on data collected.Project 9: Overweight and Obesity InterventionSteps To A New You: Collect pre, post, follow-up data on eating habits, physical activity, body image, using a questionnaire; resting heart rate, BMI; daily steps walked (using a pedometer).Addressing Fad Weight Loss diets: develop and test materials for extension educators.Project 10: Dietary Guidelines and MyPyramidRecord number of adult and youth participants and classes conducted.Determine the effectiveness of a web-based nutrition education program by monitoring fruit and vegetable consumption of adult participants.Project 11: Factors Influencing Food Intake of Young ChildrenObservational data will be collected on young childrens food intake.Food frequency questionnaires completed by children in the Kalispel tribe.

2. Data Collection Methods

- On-Site
- Sampling
- Observation
- Mail
- Telephone

Description

Based on the Evaluation Method previously described, data will be collected on:
Number of participants attending classes, and including their age, gender, and ethnicity.
Using a variety of surveys (pre, post, follow-up, retrospective).
Physical measurements: height, weight, resting heart rate.
Level of physical activity - using a pedometer to record daily steps.
NOTE: In each Project Summary, information is provided on how data is collected for each project.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Nutrient and Waste Management

2. Brief summary about Planned Program

This program integrates research scientists, extension specialists and educators to create new knowledge and disseminate that knowledge to end users. Much of the research and extension is in response to the growing dairy industry in Idaho, and the increasing challenge of managing waste produced by that industry. Soil and plant scientists collaborate with dairy experts to study and teach about the effects of manure on various soil-cropping systems in semi-arid southern Idaho, and about various management strategies that protect soil and water quality, while providing cost-effective methods for manure management..

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 101 20% Appraisal of Soil Resources
- 102 10% Soil, Plant, Water, Nutrient Relationships
- 133 20% Pollution Prevention and Mitigation
- 205 10% Plant Management Systems
- 403 30% Waste Disposal, Recycling, and Reuse
- 601 10% Economics of Agricultural Production and Farm Management

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Continuing Education for NWM planners, agronomists, consultants and producers and regulators
Short-understand current regulation and guidelines, CCA recert, CID training
Intermediate-Implement system for ensuring new information is in hands of above
Long-Producers and consultants who understand and consider BMPs part of their standard operation
Improve guidelines and develop BMP's for N and W Management by reducing nutrient loading (e.g. P) from the same in soil and water
Short-assess and educate
Intermediate-implementing current BMPs and plans
Long-Develop BMPs and implement control practices
Improve guidelines and develop BMP's for N and W Management by reducing air emissions CAFOs and food processors
Short-assess and educate
Intermediate-implementing current BMPs and plans
Long-Develop BMPs and implement control practices

2. Scope of the Program

- Integrated Research and Extension
- Multistate Integrated Research and Extension
- In-State Research
- In-State Extension
- Multistate Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Current information on a particular topic is limited, unavailable or outdated.There is a desire to improve NM planning and/or reduce emissions on the part of the producer and/or regulatory agencies.There will be an economic benefit to the producer when implementing NWM practices.

2. Ultimate goal(s) of this Program

Ultimate goals of the nutrient and waste management team are to create new knowledge about animal waste management, particularly related to application of wastes to plant-soil systems, and plant nutrient management as related to use of animal waste applications. Other goals include development and disemmination of new waste management treatments and technologies. New knowledge is expected to lead to new best practices. Those practices, when taught to and adopted by farmers, dairy operators, and other land managers will help maintain and improve environmental conditions, while providing economical practices for those in agricultural industries.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	1.4	0.0	1.2	0.0
2009	1.4	0.0	1.2	0.0
2010	1.4	0.0	1.2	0.0
2011	1.4	0.0	1.2	0.0
2012	1.4	0.0	1.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Nutrient Management Conference/workshop, annually, 1 research update session, 4 concurrent workshops, 110 attendees.Nutrient Management Field day, annually, 125 attendeesNWM training and recertification, 2x year, 20 per session, Odor Workshops, annually, 50 people, CCA credits, online testing, 20 people per year, Precision Ag Field Day, annually, 100 peopleCID Training, 2x per year, two locations, 20 annually, Review session annuallyIndustrial and Municipal Land Application Training and certification, annually, 100 peopleR&E Center Field days, annually, three locations, 200 peopleCommodity Schools, Annually, 700 people,Management Intensive Grazing Workshops, 2x year, Annually, 40 per year Irrigation dealer training to improve system design and performance. Annually, 20 peopleCIS, Online and Print on DemandSugarbeet Fertility Guide, yr 1Pasture Fertility Guide, yr 1Field Corn Guide, yr 1Winter land application of lagoon effluent, yr 4Selection and maintenance of equipment for land app, yr 2Lagoon solids management, yr 1Odor Measurement, yr 1Precision Ag topicsSeries on Manure components, Copper, salt, P, etc, yr 3, 4, 5 Bulletins, Online and Print on Demand Saline and Sodic Soils, Yr 2Irrigation water quality, yr 1Dairy Odor BMP's, yr 1Urea Management, yr 1Managing winter forage for winter uptake, yr, 2P management on CAFO's, Yr 3,Refereed Publications, 5 per year, yrs 1-6Onion N and P Fertilization, Manure/compost N for sugarbeetsWater and N effects on wheat protein and quality including both hard and soft classesNewslettersPopular pressAs requestedProceedings, One article per speaker at each annual conference, yr 1-6Annual ReportsOne per research project per year, yr 1-6Web PagesManure management, update each yrIndividual webpage updates, yearly

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Other 1 (Field days) • Demonstrations • Education Class • One-on-One Intervention	• Web sites • Newsletters

3. Description of targeted audience

Producers and ProcessorsProfessional ConsultantsThe public affected by NWM issuesLocal and/or state officials

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	500	750	20	20
2009	500	750	20	20
2010	500	750	20	20
2011	500	750	20	20
2012	500	750	20	20

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**1 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- NWM Conference.

2008 :1 **2009 :**0 **2010 :** 1 **2011 :**0 **2012 :**0

- NM Field Day.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- NWM Training and Recertification.

2008 :40 **2009 :**40 **2010 :** 40 **2011 :**40 **2012 :**0

- Odor Workshops.

2008 :50 **2009 :**50 **2010 :** 50 **2011 :**50 **2012 :**0

- CCA Credits, Online Testing.

2008 :20 **2009 :**20 **2010 :** 20 **2011 :**20 **2012 :**0

- Precision Ag Field Day.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- CID Training.

2008 :40 **2009 :**40 **2010 :** 40 **2011 :**40 **2012 :**0

- Industrial and Municipal Land App. Training.

2008 :100 **2009 :**100 **2010 :** 100 **2011 :**100 **2012 :**0

- R&E Center Field Days.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- Commodity Schools.

2008 :700 **2009 :**700 **2010 :** 700 **2011 :**700 **2012 :**0

- MiG Workshops.

2008 :40 **2009 :**40 **2010 :** 40 **2011 :**40 **2012 :**0

- Extension publications (peer reviewed; CIS, Bulletins, etc.)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

O: Adequate skilled workforce to work on waste management problems.I: Number of people certified (irrigation designers, waste management planners, etc.)..

2. Outcome Type : Change in Condition Outcome Measure

2008 :20 **2009 :** 20 **2010 :** 20 **2011 :**20 **2012 :** 20

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

O: Producers apply recommended nutrient management principles on farms.I: Percentage of course attendees that develop NM plans with recommended practices.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
40	40	40	40	40

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems
- 403 - Waste Disposal, Recycling, and Reuse
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

O: Water quality is protected through compliance with nutrient management regulations.I: Number of NMP violations cited (from yearly survey).

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	30	20	10	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

O: Producers adopt practices to reduce the risk of lagoon discharges.I: Reduced number of discharges or freeboard conditions based yearly survey.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
9	6	3	2	2

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

O: Producers and consultants have access to relevant, research-based information.I: Number of publications distributed, downloaded, accessed.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
300	300	300	300	300

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships

- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems
- 403 - Waste Disposal, Recycling, and Reuse
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

O: Pasture managers use nutrient management practices that contribute to the efficient and effective use of nutrients.I: Number of students adopting recommended practices (soil testing, MiG, etc.; survey).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3	3	3	3	0

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems
- 403 - Waste Disposal, Recycling, and Reuse
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

O: Improve application of odor and emissions control principles for confined animal operations.I: Percent adoption of odor and emissions control practices by course attendees.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
40	40	40	40	40

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

O: Reduced nutrient levels in soil and water.I: Number of sensitive areas with improved average soil and water test values.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
10	15	20	25	30

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems
- 403 - Waste Disposal, Recycling, and Reuse
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

O: Irrigators understand how to Improve water and nitrogen use efficiency under reduced water conditions.I: Number of People attending UI extension classes in water and nitrogen-use efficiency.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
80	60	60	40	40

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 205 - Plant Management Systems

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Public priorities
- Competing Programatic Challenges
- Government Regulations
- Natural Disasters (drought,weather extremes,etc.)
- Public Policy changes

Description

Environmental advocacy groupsResources available to the team (declining faculty, reassignment of responsibility)Changes in County, State and Federal regulationsContinued droughtDemographics (changes from rural to urban areas)Cultural resistance to change, producer apathy.Weakness of regulatory agencies to enforce regulationsEconomics of Ag industries

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- Time series (multiple points before and after program)
- Case Study
- After Only (post program)
- Retrospective (post program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

Description

Evaluation includes post-participation questionnaires given at the conclusion of many workshops and conferences, to determine the level of learning that has taken place, and the intentions of participants to adopt practices recommended in the programs. Additional studies may include follow-up questionnaires mailed or telephoned to participants, at some interval following the conclusion of a program.

2. Data Collection Methods

- Journals
- On-Site
- Sampling
- Observation

Description

Post-program questionnaires are likely to provide the largest number of data points for this program. However, high quality data is also expected by observing the actual installation or adiption of recommended practices on the ground.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Other Idaho Commercial Crops

2. Brief summary about Planned Program

Several agricultural commodities are included in this topic team. These include, but are not limited to oil crops, pulse crops, mint, fruit and berries. This team included an interdisciplinary team of researchers and extension faculty.
The specific priority issues being addressed include:
Variety development and testing: This applies particularly to oil crops and berries although we cooperate with ARS plant breeders in regard to varietal development of some of the other crops
Economic viability - e.g. reduction in fertilizer, pesticide and labor inputs and pollinator management costs
Environmental Sustainability - maximizing water use efficiency by using drip irrigation, maximizing nitrogen use efficiency by making more intensive use of soil and tissue testing, pesticide and fertilizer application through drip irrigation systems, evaluation of alternative pesticides and biologically based pest management options for key pests
Biological Applicability - addressing agricultural production issues with a greater understanding of the fundamental interactions between management inputs, pest impacts, and plant responses
Increased clientele access to research/extension information relating to crop production and pest management issues addressed
Alternative uses of crops such as bioproducts and biofuels

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 111 10% Conservation and Efficient Use of Water
- 204 10% Plant Product Quality and Utility (Preharvest)
- 205 15% Plant Management Systems
- 211 5% Insects, Mites, and Other Arthropods Affecting Plants
- 212 10% Pathogens and Nematodes Affecting Plants
- 215 10% Biological Control of Pests Affecting Plants
- 216 15% Integrated Pest Management Systems
- 403 10% Waste Disposal, Recycling, and Reuse
- 404 10% Instrumentation and Control Systems
- 711 5% Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The Other Idaho Commercial Crops topic team addresses production and pest management issues needed to improve the economic and environmental sustainability of those minor crops that are already being commercially grown in Idaho, even if by only a few growers or on small acreages.Idaho growers currently produce a variety of commercial crops including vegetable, fruit, seed and other crops that are located in specific areas of the state or on small acreages across a wider geographic region. These crops are sometimes called “minor crops” because they are produced on 300,000 acres or less on a national basis compared to the millions of acres dedicated to major crops such as corn, soybeans and wheat. Minor crops have established markets and political influence via grower associations and commodity commissions. They are not considered alternative crops because they have established markets, a tradition of production in Idaho, and are often represented by established growers. Most of these crops produced in Idaho lack, individually, the critical mass of personnel, resources and political influence needed to generate and maintain research and extension programs aimed at improving their economic and biological sustainability.A major issue in minor crop production is the efficacy and availability of pesticides. EPA and USDA have been working closely with minor crop growers and commodity groups to preserve critical uses of certain older pesticides while working with IR-4 to rapidly make available new

reduced risk pesticides. While the impact of the 1996 Food Quality Protection Act (FQPA) is still unknown, some pesticides have been shown to have high levels of exposure to farm workers and applicators resulting in label restrictions for minor crops. Efficacy and phytotoxicity information is needed to augment information produced by IR-4 magnitude of residue studies. Mechanisms that enhance communication and collaboration among land grant universities, growers and organizations involved in minor crop production are needed to identify, prioritize and advance the critical research and extension needs of minor crop producers.

Plant Germplasm, Genetic Resources and Conservation, Plant Health and Well Being:
UI researchers focus on identifying and manipulating plant germplasm to improve crop plant performance and the production of seed and other plant products. It is also their goal to develop economical, biological and socially compatible crop management strategies that increase production efficiency. Research in this area is conducted in close cooperation with input from relevant commodity groups including the Idaho Wheat Commission, Idaho Barley Commission, Idaho Canola/Rapeseed Commission, and others. This research is also planned and conducted with the cooperation of university researchers in Oregon and Washington as well as ARS researchers in the three- state region in accordance with our long-standing Tri-State Agreement.

Crop Production Systems:
This research emphasis is to develop marketing alternatives, and product quality and consistency, to meet the consumer's demands. It is also our goal to decrease the loss of natural resources (e.g. soil and water) and agricultural inputs (e.g. chemicals) by Idaho food producers.

2. Scope of the Program

- Multistate Extension
- Multistate Research
- In-State Research
- In-State Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

There will be sufficient funding and clientele to work with. That the crops being grown with our projects will still be grown by producers throughout the six year planning period.That the issues we are addressing with our work will still be relevant through 2011.

2. Ultimate goal(s) of this Program

The ultimate goal of the Other Idaho Commercial Crops plan of work will be improvement in economic and environmental conditions such as improved water quality (reduction of pesticide levels) in ground and surface water bodies as a result of increased IPM practice adoption, improved profitability, improved water use efficiency and increased efficacy of pesticides.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.7	0.0	5.3	0.0
2009	2.7	0.0	5.3	0.0
2010	2.7	0.0	5.3	0.0
2011	2.7	0.0	5.3	0.0
2012	2.7	0.0	5.3	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Professional invited and submitted presentations (e.g. professional scientific organizations such at the Weed Science Society of America and the Entomological Society of America)Professional submitted presentations (e.g. professional scientific organizations such at the Weed Science Society of America and the Entomological Society of America)Workshops, field tours, demonstration projects and presentations (commodity schools, research reports, grower workshops)Extension Publications (Current Information Series, Proceedings of Winter Commodity Schools, Pacific Northwest newsletters, websites, pest management strategic plans, crop profiles)Professional Publications (book chapters, journal articles)Applied and basic laboratory and field research experiments (variety development, pesticide residue and efficacy field trials, soil fertility and irrigation trials, biology and ecology of crops experiments)

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• One-on-One Intervention • Group Discussion • Demonstrations • Workshop • Education Class	• TV Media Programs • Public Service Announcement • Web sites • Newsletters

3. Description of targeted audience

Growers of minor crops in Idaho and western U.S., EPA, USDA, ISDA and other western departments of agriculture, regional land grant institutions, public interest groups, crop advisers and farm workers throughout Idaho will be the target audience of this program. The target audience will participate by providing input into program selection, providing collaboration and resources for research and extension projects and by participating in educational programs.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	6230	55125	0	0
2009	6230	55125	0	0
2010	6230	55125	0	0
2011	6230	55125	0	0
2012	6120	55000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0 **2009 :** 1 **2010 :** 0 **2011 :** 1 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	9
2009	1	9
2010	2	9
2011	2	9
2012	1	9

V(H). State Defined Outputs

1. Output Target

- Professional invited presentations.

  2008 :39 **2009 :**39 **2010 :** 39 **2011 :**39 **2012 :**0

- Professional submitted presentations.

  2008 :93 **2009 :**93 **2010 :** 93 **2011 :**93 **2012 :**0

- Workshops, field tours, demonstration projects and presentations.

  2008 :259 **2009 :**259 **2010 :** 259 **2011 :**259 **2012 :**0

- Extension Publications (peer reviewed; CIS, Bulletins, etc.).

  2008 :9 **2009 :**9 **2010 :** 9 **2011 :**9 **2012 :**9

- Other Professional Publications.

  2008 :52 **2009 :**52 **2010 :** 52 **2011 :**52 **2012 :**52

- Applied and basic laboratory and field research experiments.

  2008 :89 **2009 :**89 **2010 :** 89 **2011 :**89 **2012 :**0

- Refereed journal articles

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

O: Producers are aware of issues and knowledgeable of practices that affect the environmental and economic sustainability of minor crop production.I: Number of participants in programs.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :250 **2009 :** 250 **2010 :** 250 **2011 :**250 **2012 :** 250

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

- 404 - Instrumentation and Control Systems

1. Outcome Target

O: Growers use best practices in the production of minor crops.I: Number of Idaho growers indicating adoption of recommended practices (followup survey data).

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	120	140	160	180

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems
- 404 - Instrumentation and Control Systems

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2	2	2	2	0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 403 - Waste Disposal, Recycling, and Reuse
- 404 - Instrumentation and Control Systems
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Government Regulations
- Competing Programatic Challenges
- Appropriations changes
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Competing Public priorities
- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)

Description

The Plan of Work we are submitting is based on conditions in 2005. None of the team members are 100 percent certain how long these conditions will exist in the future. For example, we do not know how the rapidly changing demographics in Idaho will impact the environmental, economic, and social aspects of the Sustainable Production and Pest Management Systems addressed by this Plan of Work. We do not know when Congressional priorities will change and therefore affect the funding levels needed to carry out these programs, or if continuing drought will cause changes in commodities that can be profitably produced.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- During (during program)
- Before-After (before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparisons between program participants (individuals,group,organizations) and non-participants
- After Only (post program)
- Case Study

Description

Pre and Post tests will be used to evaluate program impact.Survey instruments (both electronic and paper format) will be used to evaluate impact on program participants.Number of visits by participants to our program websites will be tracked over time.Number of growers adopting practices taught in programs, and acres represented by those growers will be tracked over time.

2. Data Collection Methods

- Other (Performance Evaluations)
- Case Study
- Unstructured
- On-Site
- Tests
- Sampling
- Journals
- Observation

Description

Pre and Post tests will be used to evaluate program impact.Survey instruments (both electronic and paper format) will be used to evaluate impact on program participants.Number of visits to participant's websites will be tracked over time.Number of growers adopting practices taught in programs, and acres represented by those growers will be tracked over time.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Potatoes

2. Brief summary about Planned Program

Potatoes are the single largest crop produced in Idaho in terms of gross revenue, and are grown in rotation with small grains, sugar beets, alfalfa, corn, and other crops. It is essential that growers have access to information regarding best management practices for successful implementation of an integrated systems approach to potato production. The efficiency of such an approach not only impacts potato yield, quality, and revenue; but also affects the environment in relation to soil and water quality and nutrient cycling. Educating growers and those who advise them as to systems and technologies that are more efficient is beneficial to the Idaho agricultural community, as well as the general public. Based on stakeholder input from local and statewide industry/grower advisory groups, we are focused on developing an economically and environmentally sustainable potato industry by developing programs that include basic and applied research that is communicated to the potato industry through demonstrations, seminars and workshops at conferences and grower meetings, as well as through print and electronic media.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 10% Soil, Plant, Water, Nutrient Relationships
- 202 10% Plant Genetic Resources
- 203 10% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 10% Plant Product Quality and Utility (Preharvest)
- 205 20% Plant Management Systems
- 212 10% Pathogens and Nematodes Affecting Plants
- 216 10% Integrated Pest Management Systems
- 503 10% Quality Maintenance in Storing and Marketing Food Products
- 603 10% Market Economics

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The Idaho potato industry has changed dramatically in the last many years, and continues to change at a rapid rate. These changes include adapting to changing consumer preferences such as providing different varieties. Producers are also faced with adopting newer production practices that lead to better utilization of resources. Conventional pesticides remain an integral part of managing diseases, weeds, insects, and other pests in potatoes, but food safety and environmental concerns must be taken into consideration. Producers need to adopt production practices that lead to a quality product that is acceptable to the end users.Short term issues: Potato producers and others in the potato industry need to be continually updated on information that is immediately needed, or information that is needed in general to produce a quality potato crop. Growers need information on managing crops in short water years. They also require timely information on the monitoring of and control of new pests or outbreaks of known pests. Input costs, such as fuel and fertilizer and crop protection products are rising dramatically making it difficult to keep production costs down. The potato industry also faces the potential loss of sprout inhibitors and other crop protection products due to regulation and/or pest resistance issues.Intermediate issues: Pest management strategies must be modified and/or developed so they are sustainable within the context of limited crop choices and against the backdrop of increasing financial and production risks.Long-term issues: Cost of production efficiencies requires that the potato industry adopt technologies that permit growers to remain competitive and profitable. However, current varieties require high levels of inputs, which reduce potential return to the grower and increases the possibility of negative impacts on the environment. New varieties need to be well adapted to production practices and must maintain quality in long term storage. Additionally, production practices must be continually evaluated and possibly modified to incorporate new varieties that have demonstrated potential to provide growers with

positive returns. Short potato rotations that rely on pest protection products have the potential of increasing pest problems. Increasing competition for water from non-agricultural users will mandate better use of water supplies. Public opinion about the health risks posed by pesticide residues makes food crops like potatoes increasingly vulnerable to shifting consumer demands. The Idaho Department of Environmental Quality has identified regional "areas-of-concern" where monitoring suggests the possibility of agricultural pesticide movement into aquifers. Pesticides can be a significant portion of potato production costs, and loss of pesticides resulting from the Food Quality Protection Act and replacement with more expensive alternatives will further constrain profits. These input cost concerns are compounded by potential pesticide resistance developing in most pests of potatoes. The continued availability of high quality, productive seed potatoes is also crucial.

Plant Germplasm, Genetic Resources and Conservation, Plant Health and Well Being:
UI researchers focus on identifying and manipulating plant germplasm to improve crop plant performance and the production of seed and other plant products. It is also their goal to develop economical, biological and socially compatible crop management strategies that increase production efficiency. Research in this area is conducted in close cooperation with input from relevant commodity groups including the Idaho Wheat Commission, Idaho Barley Commission, and others. This research is also planned and conducted with the cooperation of university researchers in Oregon and Washington as well as ARS researchers in the three- state region in accordance with our long-standing Tri-State Agreement.

Crop Production Systems:
This research emphasis is to develop marketing alternatives, and product quality and consistency, to meet the consumer's demands. It is also our goal to decrease the loss of natural resources (e.g. soil and water) and agricultural inputs (e.g. chemicals) by Idaho food producers.

2. Scope of the Program

- Multistate Integrated Research and Extension
- In-State Research
- Multistate Research
- Integrated Research and Extension
- In-State Extension
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The potato industry continues to have new challenges that influence how the entire industry conducts business. These challenges range from changing consumer preferences, new pests affecting production, cultural management issues, food safety issues, environmental concerns, pests developing resistance to control measures, and other issues. To meet the concerns and challenges faced particularly by potato producers requires the continual development of new technology and dissemination of information to alleviate detrimental consequences to the potato industry as a whole. Efforts in the potato program are designed to develop new information as needed to maintain a profitable and sustainable potato industry in Idaho, which is believed to be wanted by the potato industry. To maintain a sustainable industry, potato producers and others need to adopt new information and technology. The information and new technology will be delivered to those needing the information through various transfer methods such as conferences, websites, or written media. Developing new technology and delivering the information to the potato industry requires investment of time and money from various sources including public and private entities. This plan addresses issues and concerns, but adoption of the new technology or new/modified management strategies is beyond the scope of this plan. Innovative and progressive producers that are willing to incorporate new technologies will be required for their adoption by the rest of the industry. Evaluating the effectiveness of the plan can be addressed by evaluating case studies.

2. Ultimate goal(s) of this Program

It is the goal of the potato team to deliver essential information to growers regarding best management practices for an integrated potato cropping system. The efficiency of this system not only impacts potato yield, quality, and revenue; but also affects soil and water environments and nutrient cycling. The potato team's main focus is to create an economically and environmentally sustainable potato industry by developing programs that include basic and applied research that is communicated to the potato industry through demonstrations, seminars and workshops at conferences and grower meetings, and also disseminated through print and electronic media.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	3.9	0.0	5.0	0.0
2009	3.9	0.0	5.0	0.0
2010	3.9	0.0	5.0	0.0
2011	3.9	0.0	5.0	0.0
2012	0.0	0.0	5.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Based on stakeholder input, field and laboratory research will be conducted to investigate possible solutions to the challenges faced by the potato industry. Information obtained from this research will be disseminated via newsletters, trade publication articles, newspaper articles and extension bulletins. Face to face information dissemination will occur via seminars, workshops, one on one consultations and field days. When appropriate, information will also be presented in refereed scientific journals and presented at professional scientific meetings. Information will also be posted on web sites and shared via email in response to individual inquiries.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Education Class • One-on-One Intervention • Workshop • Group Discussion • Demonstrations	• Web sites • Other 1 (e-mail) • Newsletters • TV Media Programs • Public Service Announcement

3. Description of targeted audience

The main target audience is potato producers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	9500	140000	0	0
2009	9500	140000	0	0
2010	9500	140000	0	0
2011	9500	140000	0	0
2012	0	0	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**1 **2010 :** 0 **2011 :** 1 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	1	3
2009	1	3
2010	1	3
2011	1	3
2012	1	3

V(H). State Defined Outputs

1. Output Target

- Newsletters.

  2008 :9 **2009 :**9 **2010 :** 9 **2011 :**9 **2012 :**9

- Extension bulletins.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Workshops and Seminars.

  2008 :150 **2009 :**150 **2010 :** 150 **2011 :**150 **2012 :**150

- Popular Press Articles.

  2008 :40 **2009 :**40 **2010 :** 40 **2011 :**40 **2012 :**40

- Field Days.

  2008 :4 **2009 :**4 **2010 :** 4 **2011 :**4 **2012 :**4

- Individual Consultations.

2008 : 100 **2009 :** 100 **2010 :** 100 **2011 :** 100 **2012 :** 100

- Refereed Journal Articles.

2008 : 9 **2009 :** 10 **2010 :** 10 **2011 :** 9 **2012 :** 10

- Graduate Students.

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

- Professional Meetings.

2008 : 11 **2009 :** 11 **2010 :** 11 **2011 :** 11 **2012 :** 11

- Email Information Dissemination.

2008 : 200 **2009 :** 200 **2010 :** 200 **2011 :** 200 **2012 :** 200

V(I). State Defined Outcome

1. Outcome Target

O: Growers apply best potato management practicesI: Number of growers adopting recommended practices

2. Outcome Type : Change in Action Outcome Measure

2008 : 130 **2009 :** 130 **2010 :** 130 **2011 :** 130 **2012 :** 130

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 216 - Integrated Pest Management Systems
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 603 - Market Economics

1. Outcome Target

O: Growers are aware of pest incidenceI: Number of Subscribers to pest alert website

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 340 **2009 :** 360 **2010 :** 380 **2011 :** 400 **2012 :** 400

3. Associated Knowledge Area(s)

- 212 - Pathogens and Nematodes Affecting Plants
- 216 - Integrated Pest Management Systems

1. Outcome Target

O: Growers are knowledgeable about best potato management practices.I: Number of participants attending educational programs.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
75	75	75	75	75

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 216 - Integrated Pest Management Systems
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 603 - Market Economics

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
1	1	1	1	0

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 216 - Integrated Pest Management Systems
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 603 - Market Economics

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)
- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programatic Challenges
- Natural Disasters (drought,weather extremes,etc.)
- Government Regulations

Description

Adoption of some new practices may include investment in equipment. Producers will not and cannot invest in new equipment if they do not have the money for the investment. Many factors outside the influence of this potato team play a significant role in the economic status of the potato industry. Adoption assessment measures may not necessarily be representative of the industry. Resistance to change, especially when livelihoods are at stake, can significantly affect adoption of new management techniques and the subsequent measurement of team outcomes.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

Description

Evaluating the effectiveness of the potato team will be accomplished by conducting pre- post-tests, or collecting information from surveys. We will ask how many producers have attended a previous workshop on the same topic, and how many have adopted practices that were learned in a previous workshop. The surveys may be conducted by other entities if the information can be connected to the program being conducted. For example, the number of acres of a particular potato variety grown, or the use of a particular type of irrigation system.

2. Data Collection Methods

- On-Site
- Tests
- Observation

Description

To determine the number of potato producers adopting practices, we will survey attendees at the annual Potato Conference held each January or at other appropriate meetings. Anecdotal information may be collected during on-farm visits or at other meetings discussing practices being adopted by producers in which the producer learned of the information developed by the potato team, and it was presented at a workshop or seminar, or the information was disseminated via written format.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Range Management

2. Brief summary about Planned Program

The Range Management topic team has two projects addressing the critical issues of sustaining grazing use and reducing conflict on public rangelands and management of pests, especially invasive species. The team will accomplish our goals through educational programs that include workshops, presentations at meetings, range tours, publications, website development and working with individuals, agencies and organizations that manage, use or are interested in rangelands in Idaho. The integrated team consists of 8 specialists and research scientists from 4 University of Idaho departments and 10 Extension Educators. Although salaries come primarily from formula and budgeted funds, much of the operating funding will come from federal and state grants.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 121 50% Management of Range Resources
- 213 25% Weeds Affecting Plants
- 307 25% Animal Management Systems

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Approximately 47% of Idaho is rangeland, with 69% in federal and state ownership. Historically, the primary land use on public rangelands has been livestock grazing, hunting and fishing. In recent years these lands have received increased recreational use. This increased use has brought with it a greater awareness of and potential degradation to the rangeland environment and increased conflict among users. Critical short-term, intermediate and long-term issues include: a) sustaining grazing use and reducing conflicts on public rangelands, b) management of pests including invasive species on rangelands.

2. Scope of the Program

- Multistate Integrated Research and Extension
- Integrated Research and Extension
- In-State Extension
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The primary goal of the Range Topic Team is to insure all uses of rangelands in Idaho are sustainable, resulting in a quality environment and healthy economy. To achieve that goal, stakeholders need to control invasive species, adopt sustainable grazing management practices and the general public, including youth, must have a better understanding of rangeland ecology and the contribution of rangelands to a quality environment and healthy economy. The Topic Team will deliver a variety of educational programs to address rangeland issues and cooperate with 4H, FFA and teachers to educate youth. A total of 2.55 FTE's will be devoted to accomplishment of these goals.

2. Ultimate goal(s) of this Program

The ultimate goal of the range topic team is to insure that all uses of both public and private rangelands in Idaho are sustainable, resulting in a quality environment and healthy economy for present and future generations.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.6	0.0	0.6	0.0
2009	2.6	0.0	0.6	0.0
2010	2.6	0.0	0.6	0.0
2011	2.6	0.0	0.6	0.0
2012	2.6	0.0	0.6	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Planned activities for the grazing management program include at least 6 monitoring workshops plus on the ground assistance for ranchers, 1 workshop/ year and participation in adaptive grazing management planning between public land permittees and agency personnel, and 4 BEHAVE workshops on animal grazing behavior. The latest technology and information on grazing management will be provided through a Pacific Northwest short course, website projects, publications, at least 4 range tours/year and youth projects and winter beef schools in several counties. Multi-year research projects on animal grazing behavior and alternative forages for extending the grazing season are also planned.Planned activities for the rangeland pest management program include at least 3 county weed tours/year and service as County Weed Supervisor in 2 counties. The latest technology and information on weed identification and control will be provided through numerous workshops/seminars, a noxious weed bulletin, other publications, websites and operation of the Weed Diagnostic lab.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Group Discussion • Education Class • Demonstrations • Workshop • One-on-One Intervention	• TV Media Programs • Other 1 (Newspaper articles) • Newsletters • Public Service Announcement • Web sites

3. Description of targeted audience

The target audience most likely to participate in and benefit from the programs are: land owners, range livestock producers, local government and resource management agency personnel. This audience will participate by attending workshops, meeting one-on-one with topic team members, reading extension publications, seeking information on websites and participating in on-the-ground projects.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	3000	500	100	200
2009	3000	500	100	225
2010	3000	500	100	250
2011	3000	500	100	250
2012	3000	500	100	250

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	1
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Range and weed tours.

  2008 :4 **2009 :**4 **2010 :** 4 **2011 :**4 **2012 :**4

- Range monitoring and grazing workshops.

  2008 :2 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Weed workshops and presentations.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- 7th grade science school.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- BEHAVE training.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Extension publications.

2008 :1 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

O: Awareness of new, accepted or recommended grazing and weed management practices.I: Number attending educational events.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :270 **2009 :** 100 **2010 :** 100 **2011 :**100 **2012 :** 100

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources
- 213 - Weeds Affecting Plants
- 307 - Animal Management Systems

1. Outcome Target

O: Youth learning about rangeland ecology and management.I: Number of youth participating in school programs on range.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :100 **2009 :** 100 **2010 :** 100 **2011 :**100 **2012 :** 100

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources
- 213 - Weeds Affecting Plants
- 307 - Animal Management Systems

1. Outcome Target

O: Extension Educators & NRCS personnel understanding and teaching BEHAVE principles.I: Number of Extension Educators & NRCS trainers trained.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources
- 307 - Animal Management Systems

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Natural Disasters (drought,weather extremes,etc.)
- Competing Programatic Challenges
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Appropriations changes
- Populations changes (immigration,new cultural groupings,etc.)

Description

If federal, state or county budgets for extension are reduced, it will greatly affect the range program. As Idaho demographics

change toward an urban dominated population rather than rural, funding for traditional extension programs may decrease. Major changes in weather, such as drought, may change the priority of projects within the range plan. Weather can also be a factor in attendance at planned workshops.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Case Study
- After Only (post program)
- Time series (multiple points before and after program)
- Before-After (before and after program)
- Retrospective (post program)

Description

The effectiveness of the range team program will be evaluated by attendance records, such as number of youth participating in FFA range contests, program evaluations and number of requests for information.

2. Data Collection Methods

- Case Study
- Observation
- On-Site
- Mail
- Unstructured

Description

Workshop evaluations, follow-up interviews with program participants, surveys conducted by the Idaho Rangeland Resource Commission and the Idaho Weed Control Association and observations will be used to assess the success of the program. Anecdotal information, collected at livestock association meetings, workshops, and office/ranch visits will also be used to assess the adoption of information and technology presented at workshops, etc.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Small Acreages and Emerging Specialty Crops

2. Brief summary about Planned Program

Our team is providing for the educational and research needs in production and marketing of specialty crops of both traditional growers looking for a way to diversify and of small acreage landowners looking to make a living off their land, or to make their land productive, while preserving natural resources.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 25% Soil, Plant, Water, Nutrient Relationships
- 202 25% Plant Genetic Resources
- 205 25% Plant Management Systems
- 212 25% Pathogens and Nematodes Affecting Plants

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Much of Idaho's population growth has occurred in and around urban areas. Many of these newcomers are settling on small acreage parcels (5-40 acres), some with plans to start small farm enterprises.There is an increasing demand for information for growers of specialty crops to help them remain profitable. Research and program delivery on production and marketing of specialty crops has the potential to serve many of our current and beginning farmers. In addition, these small-scale, high-value enterprises show potential to help in stabilizing and expanding income, particularly in struggling rural communities.Also in recent years, prices of many Idaho commodity crops have remained stagnant or decreased while the costs of farm inputs have risen. Many Idaho farmers want to diversify their crops and/or their markets. Many areas in Idaho are seeing an increase in the number of homeowners with acreages. These land parcels vary in size from ½ to 40 acres and provide a desired rural lifestyle. Often the homeowner wants to house horses, cattle, chickens or other livestock and possibly to raise a garden. These are for personal use rather than for monetary profit. Land ownership brings with it the challenges of pest animals and noxious weed problems. Priorities of small acreage landowners are diverse. Newcomers often need help with basic land management information such as soils, water quality, weeds. Many of these acreage owners know little about land, crop, garden or livestock management and often seek help in management of their property. Consequently, demand for assistance in crop production, pasture management, forestry and weed management has increased.Increasing urbanization, health consciousness, and needs of small landowners are combining to increase the popularity of home vegetable gardening, small truck farms, urban organic produce farms, and farmer's markets in Idaho. Among critical information needs are unbiased recommendations for variety selection to allow producers to take advantage of genetic potential found within crops. These trials must be designed to meet the informational needs of not only a diverse range of climates, but the heterogeneous types of situations demanded by consumption and market needs.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Integrated Research and Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

If increased production and marketing of high value crops by local producers is the desired outcome then growers will need to seek information, invest in the land and equipment needed, and put forth the effort to grow and market the products. To do this the growers will need to learn what can be grown or produced and what is needed for production. Extension programs can provide this information through a small farm conference on small farming techniques and by individual consultation. The conference will require organization, speakers, and grant funds. Consultations will require time, expertise and written resources provided by extension educator.If realization of owner goals for small acreages while maintaining or increasing the health of the environment is the desired outcome, then landowners will need to realize that they have a stewardship responsibility. They will also need to set goals and learn how to accomplish them while stewarding the health of their property. To do this, the landowners will need to learn how to set goals, what their restrictions are, and the technical information to accomplish the goals for their properties. Extension programs can provide this information through a Living on the Land or similar programs and by individual consultation. The programs will require organization, speakers, and grant funds. Consultations will require time, expertise and written resources provided by extension educator.If adoption of new specialty fruit and vegetable crop varieties appropriate to regional and local climatic situations will result in increased profits and agricultural success on small acreages, then growers will need to seek UI resources that provide the most current and scientifically tested variety recommendations. To do this producers will need to identify the UI as a source of valuable information and attend their field days and tours. Extension research and extension programs on specialty fruit and vegetable crops will conduct variety trials, conduct field days and recommend suggested varieties. The research and outreach will involve grant funding; UI faculty to conduct varietal selection and plot design layout: labor to plant, maintain and evaluate 2-5 + year trials of data; and organization of field demonstrations and tours.

2. Ultimate goal(s) of this Program

This team will provide the research and educational capacity and expertise to facilitate success of those who choose to operate a specialty crop or other farm business venture on a small acreage. We will teach these farmers and other landowners to manage their land to enhance or maintain their natural resources. The project success will be evaluated by the number of people engaged in our program: including those who access materials, or attend courses, workshops or conferences. We will also evaluate effectiveness by measuring the practices adopted that indicate they are making progress to protect their natural resources and/or run successful businesses.The results of our efforts will satisfy immediate educational needs of beginning farmers and landowners looking to protect their natural resources, and/or inititate (or enhance existing) farm related businesses. Over the long term, this will benefit a greater population in neighboring watersheds as water quality is improved. Land value will increase as soil is improved and weed problems are held at bay. Another segment of people looking to buy healthy food will benefit from the increased availability of local food products which are supporting local producers and processors and contributing to the local economic system to maintain strong viable communities.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.3	0.0	1.8	0.0
2009	2.3	0.0	1.8	0.0
2010	2.3	0.0	1.8	0.0
2011	2.3	0.0	1.8	0.0
2012	2.3	0.0	1.8	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conferences:Offer yearly Small Farm Conference; alternating between southern and northern Idaho.Smaller conference in alternate

years in Dist 2 or 3 - when larger conference is up north.Courses: Teach in-depth courses ranging from 8 to 18 weeks and focused on both producers and landowners.Small Acreage Farming -every other in District I, odd years in Moscow, even years in Plummer/St. Maries; even years in District IIAg Entreprepeurship -Every year in Lewis/Clearwater counties, every other in Moscow and Benewah, and potentially in District IILiving on the Land or Stewardship of small acreages - Boise, Parma , Sandpoint, yearly; Twin Falls/Jerome, in 2008 and 2010Workshop Series or Shortcourses:Pasture Management - Every year in District II (Canyon); twice every year in District I, north (Benewah/Bonner) and south(Lewis and surrounding)Direct Marketing - 2006 in boise (Dist. II) and 2007 in SE Idaho (District IV)Special Topics - Every year in Bonner CountyAgricultural Tours and Field Days:Farm tours - annually in District IV; twce per year in District II (Boise area)Field Days - annually in Sandpoint, AberdeenField trials and demonstrations:Small Fruit - Sandpoint, 2007-2011Huckleberries, bilberries and haskap - Sandpoint and Treasure Valley, 2007-2011Vegetables - Aberdeen, Parma, Treasure Valley (2006-2011); possibly beginning in Sandpoint in 2008Nursery stock and Christmas trees - Sandpoint, 2007-2011Publications:Newsletters - Small Farm News and Views (3000 copies) and Berry Bulletin - annually Impact Statements - Cultivating Success - 2007Reports - Red Raspberry Production Guide revision in 2006; Growing Western Huckleberries revision in 2007; Preferred List of Vegetables in 2007Web sites:Development of Vegetable Crops web site in 2007Quarterly maintenance of Small Fruits, Horticulture and Small Farms web sitesIndividual Consultation:County wide basis- on going yearly

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Education Class • Workshop • Demonstrations • One-on-One Intervention	• Other 1 (publications) • Web sites • TV Media Programs • Newsletters

3. Description of targeted audience

Established and prospective small-acreage, specialty crop producers, processors, and marketers.Small acreage landowners who desired to learn how to manage their land in a sustainable manner to protect natural resources.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	1500	10000	50	200
2009	1200	10000	50	200
2010	1500	10000	50	200
2011	1200	10000	50	200
2012	1500	10000	50	200

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Small Farms Conference in southern Idaho.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Small Farms Conference in northern Idaho.

  2008 :0 **2009 :**1 **2010 :** 0 **2011 :**1 **2012 :**0

- Small Acreage Farming Course.

  2008 :2 **2009 :**1 **2010 :** 2 **2011 :**1 **2012 :**2

- Ag Entrepreneurship Course.

  2008 :2 **2009 :**3 **2010 :** 2 **2011 :**3 **2012 :**2

- Direct marketing shortcourse.

  2008 :1 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Pasture management shortcourse.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Living on the Land course.

  2008 :3 **2009 :**2 **2010 :** 3 **2011 :**2 **2012 :**2

- Living on the Land Tour.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- LOTL 5 year report.

  2008 :0 **2009 :**0 **2010 :** 1 **2011 :**0 **2012 :**0

- Vegetable variety trials.

  2008 :4 **2009 :**4 **2010 :** 4 **2011 :**4 **2012 :**4

- Specialty fruit crop trials.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Field days at demonstration plots.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- Small fruit workshops - Huckleberries, etc.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- Web site - developed on vegetable varieties.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Publication revisions - raspberries and huckleberries.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- Agricultural tour in Franklin County.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**0

- Refereed scientific journal articles.

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

O: Growers learn about specialty crops varieties appropriate for their area.I: Number attending field days to observe results of crop variety demonstration trials.

2. Outcome Type : Change in Condition Outcome Measure

2008 :100 **2009 :** 100 **2010 :** 100 **2011 :**100 **2012 :** 0

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources
- 205 - Plant Management Systems

1. Outcome Target

O: Producers and landowners gain knowledge about natural resource management, sustainable farm production, marketing and/or business management principles and practices..I: Number of participants completing workshops, farm tours, short courses or in-depth courses such as Living on the Land, Stewardship of Small Acreages, Sustainable Small Acreage Farming or Agricultural Entrepreneurship.

2. Outcome Type : Change in Condition Outcome Measure

2008 :50 **2009 :** 50 **2010 :** 50 **2011 :**50 **2012 :** 50

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

1. Outcome Target

O: Producers and landowners adopt recommended land management, production and/or marketing practices due to Univeristy of Idaho extension programming.I: Number of producers indicating they did (or intend to) adopt recommended land management, production and/or marketing practices after attending an educational class, workshop, one-on one contact or reading UI information.

2. Outcome Type : Change in Condition Outcome Measure

2008 : 10	**2009 :** 15	**2010 :** 15	**2011 :** 20	**2012 :** 20

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

1. Outcome Target

O: Landowners and farmers achieve success in protecting their natural resources and/or maintaining a successful business.I: Number of past class participants who volunteer to host tours of their farm or speak to new students in classes, workshops or at conferences.

2. Outcome Type : Change in Condition Outcome Measure

2008 : 1	**2009 :** 2	**2010 :** 3	**2011 :** 4	**2012 :** 4

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Outcome Type : Change in Action Outcome Measure

2008 : 2	**2009 :** 2	**2010 :** 2	**2011 :** 2	**2012 :** 0

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Natural Disasters (drought,weather extremes,etc.)
- Government Regulations
- Competing Public priorities
- Appropriations changes
- Economy
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Programatic Challenges

Description

Changing public priorities will influence our programs either positively or negatively. For example in the event of a food safety crisis in the national food supply, priority for the support of small farm and local food supplies will increase. Economic conditions influence everything we do in extension but in particular with small farm food supply and niche marketing. If people don't have the level of disposable income that we have now the interest in high quality food at a slightly higher price may decrease.Population changes such as increased growth in Idaho's urban areas will provide a never ending demand for natural resource protection of smallacreage parcels of land.Public policy changes that increase federal funding for environmentally based cost-share programs or incentives to growers may help the success of our program.Competing programatic challenges - If someone on our team leaves or switches their programming focus due to competing priorities we not be able to carry out all of our activities. We are all stretched to the maximum already and it won't take much to tip the balance.Changes in appropriations - could influence our team's success a great deal. With rumors of less federally appropriated funds coming to Land Grant Universities and instead going into competitive grants we may have both funding challenges and opportunities. We have developed a nationally recognized program in small farms and small acreage landowner education and we may have continuing opportunities for competitive funding. L:ess base funding however, effects salary and FTE numbers and could definitely diminish our programming capacity. If the state funding is cut any more we will be in serious trouble. If they increase funding to UI , things will proceed and potentially grow.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- After Only (post program)
- Retrospective (post program)

Description

Team members will conduct pre and post test evaluations at all workshops and for in-depth courses. The pre and post test questions will be geared to measure awareness and/or knowledge gained as well as participants expected action plans or practices they intend to adopt because of new information gained through participation. The Cultivating Success courses as well as the Living on the Land courses have evaluation plans that will include 6 month to one year later follow-up surveys and/or phone (or in person meetings) that will assess what practices have been adopted following participation in the course or workshop. The Direct marketing workshops funded through Western Risk Management Education Center also include this 6 month follow-up evaluation.Workshops, the conferences, field days and tours will include post evaluation surveys to assess knowledge gained or increased awareness related to the subject matter content. Team members conducting LOTL classes in Boise area, Magic Valley and Bonner County will plan to evaluate participants on some key issues that can be evaluated as a whole.The LOTL course in Twin Falls County was focused on landowners in a specific housing development. DEQ took water samples prior to the class and will resample to assess any changes in water quality.

2. Data Collection Methods

- Tests
- Telephone
- Structured
- Mail
- On-Site
- Observation

Description

We will use a variety of data collection methods:
Pre and post testing for all the courses
Follow-up surveys and/or phone interviews with course and conference participants (six months to one year later).

Discussions - Meetings with alumni of courses to discuss practices adopted and future needs
Observations - Individual visits or group tours to previous class participants' properties
Post evaluation surveysor questionnaires following workshops, conferences, field days and tours
Water quality tests in riparian areas associated with housing developments where LOTL courses are taught (if applicable)

V(A). Planned Program (Summary)

1. Name of the Planned Program

Sugarbeets

2. Brief summary about Planned Program

The sugarbeet topic team activities include pest management and general crop production and involves both research and extension faculty. The sugarbeet industry has been a very significant component of Idaho's agriculture sector historically but faces critical challenges as a result of changes in the global market place and additional issues related to production efficiencies.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 205 40% Plant Management Systems
- 212 40% Pathogens and Nematodes Affecting Plants
- 213 20% Weeds Affecting Plants

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Idaho ranks 2nd in the nation in sugarbeet production with 185,000 acres grown in 2005. Many production problems result from short rotations and other cropping system factors that affect pest management, soil health and soil tilth. Increased application of manure and compost from dairies to sugarbeet fields poses problems for nitrogen management and salt accumulation. Most growers excessively irrigate sugarbeets. Periodically growers face inadequate water supplies. Over-irrigation leads to a) increased disease, b) excessive nutrient leaching and erosion, and c) lower yields. Growers are not taking advantage of current technology for soil moisture monitoring and irrigation scheduling.Resistance to rhizomania is beginning to break down, and because rhizomania-resistant varieties have inadequate resistance to curly top virus, this disease is becoming more severe each year. Application timing and climate critically affect the efficacy of current herbicides. Although it will not solve all weed management problems, biotechnology and Roundup-Ready sugarbeets can significantly improve weed control, but acceptance has been slow and is not yet certain. Certain insects, particularly sugarbeet root maggot, require yearly treatment in many parts of the growing area. Infestation of beet leafhopper that transmits curly top virus is not predictable. Other insects such as cutworm, leafminer, wireworm, and black bean aphid do not have adequate economic thresholds established. Pesticide efficacy, resistance problems, and carryover are important continuing issues. Fields cropped repeatedly with sugar beet have experienced significant losses ranging from 10-80% due to sugar beet cyst nematode depending on the initial population at planting time. Crop rotation is the best option, but due to long hibernation period of this nematode, green manure is one of the effective alternative management practice. Growers are continually faced with increasing costs of production without a concomitant increase in return for the crop. Growers are highly concerned about the economics of pest control.

2. Scope of the Program

- In-State Research
- In-State Extension
- Multistate Integrated Research and Extension
- Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The USDA sugar program will maintain sugar import quotas to support prices at a level for sugarbeet profitability.The Idaho sugarbeet acreage will remain stable, but the number of growers will decline.Pest management strategies will continue to evolve, as will challenges.The UI CES Administration will provide the technical expertise, personnel and financial resources required to

measure outcomes.The adoption of Best Management Practices (BMP's) will result in reduced production costs, improved profit margin, increased sugarbeet acreage, and reduction in consolidation of farms.

2. Ultimate goal(s) of this Program

Best management practices for sugarbeet production will maximize cost-effectiveness while minimizing potential harm to environmental resources, benefiting sustainability of the agro-ecosystem and human health.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	1.4	0.0	0.9	0.0
2009	1.4	0.0	0.9	0.0
2010	1.4	0.0	0.9	0.0
2011	1.4	0.0	0.9	0.0
2012	1.4	0.0	0.9	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Planned activities include traditional and web publications, presentations at conferences, schools and workshops, field demonstrations and tours, newsletters, telephone and face to face contacts.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
• Education Class • One-on-One Intervention • Demonstrations • Workshop • Group Discussion	• Newsletters • Web sites

3. Description of targeted audience

Those affected by this program are sugarbeet growers and those who advise growers, i.e. sugar company fieldmen and agronomists, chemical companies, seed companies and consultants.The specific target audiences most likely to participate in the program are sugarbeet growers, sugar company fieldmen and agronomists, chemical company representatives and seed companies.The primary stakeholder input is through the University of Idaho Sugarbeet Working Group meeting held annually. The Working Group consists of approximately 15 growers from all areas of the state, four sugar company agriculturalists, and University of Idaho faculty working in sugarbeets. The Pest Management Strategic Plan for Western U.S. Sugarbeets provided major stakeholder input. This Plan was the result of a two-day meeting of 57 growers, commodity group representatives, industry field staff, regulators and university specialists from Colorado, Idaho, Montana, Oregon, Washington and Wyoming. This group met in Boise, Idaho on 15-16 Dec. 2004 to prioritize research, extension and regulatory needs of the sugarbeet industry. The plan was completed on August 5, 2005.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	3976	4467	0	0
2009	3976	4467	0	0
2010	3976	4467	0	0
2011	3976	4467	0	0
2012	3976	4467	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	1
2009	0	1
2010	0	1
2011	0	1
2012	0	1

V(H). State Defined Outputs

1. Output Target

- Other publications as lead author (non peer-reviewed.

  2008 :21 **2009 :**21 **2010 :** 21 **2011 :**21 **2012 :**21

- Web publications as lead author.

  2008 :10 **2009 :**10 **2010 :** 10 **2011 :**10 **2012 :**10

- Presentations.

  2008 :44 **2009 :**44 **2010 :** 44 **2011 :**44 **2012 :**44

- Newsletters.

  2008 :6 **2009 :**6 **2010 :** 6 **2011 :**6 **2012 :**6

- Organizing schools or conferences.

2008 : 2 **2009 :** 2 **2010 :** 2 **2011 :** 2 **2012 :** 2

- Organizing field days.

2008 : 5 **2009 :** 5 **2010 :** 5 **2011 :** 5 **2012 :** 5

- Field tours.

2008 : 8 **2009 :** 8 **2010 :** 8 **2011 :** 8 **2012 :** 8

- Individual face-to-face contacts.

2008 : 348 **2009 :** 348 **2010 :** 348 **2011 :** 348 **2012 :** 348

- Telephone contacts.

2008 : 1028 **2009 :** 1028 **2010 :** 1028 **2011 :** 1028 **2012 :** 1028

- Web page visits.

2008 : 2700 **2009 :** 2700 **2010 :** 2700 **2011 :** 2700 **2012 :** 2700

- Extension publications (peer reviewed; CIS, bulletins, etc.) as lead author.

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

- Research publications as lead author (peer reviewed; journals, book chapters, etc.).

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

V(I). State Defined Outcome

1. Outcome Target

O: Adoption of best management practices for sugarbeet production will maximize cost-effectiveness while minimizing potential harm to environmental resources, benefiting sustainability of the agro-ecosystem and human health.I: Percentage reduction in input costs (survey).

2. Outcome Type : Change in Condition Outcome Measure

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

1. Outcome Target

O: Target audiences will gain knowledge and an awareness of sugarbeet publications and other sources of information.I: A percentage increase in knowledge measured by pre- and post-tests, presentation evaluations, field day attendance, etc.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 10 **2009 :** 7 **2010 :** 7 **2011 :** 6 **2012 :** 6

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants

- 213 - Weeds Affecting Plants

1. Outcome Target

O: Development of new research information.I: Research publications (peer reviewed).

2. Outcome Type : Change in Condition Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	1	0	0	1

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

1. Outcome Target

O: Development of new research information.I: Number of research presentations.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
1	0	1	1	1

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Government Regulations
- Other (climate)
- Economy
- Public Policy changes

Description

The primary external factor affecting the success of the program is the political modification of the USDA sugar import program. Increasing imports of foreign sugar and the resulting depression of sugar prices could result in the loss of the sugarbeet industry. Climatic factors will affect the ability of growers to implement best management practices in some years. The expanding dairy industry is increasing the use of acreage for dairy feed production that was previously used for sugarbeet production.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Comparisons between program participants (individuals,group,organizations) and non-participants
- During (during program)
- Before-After (before and after program)
- Retrospective (post program)

Description

{NO DATA ENTERED}

2. Data Collection Methods

- On-Site
- Sampling
- Observation
- Mail

Description

Evaluations of presentations.Surveys.Data from the sugar company.Conference, field tour and field day attendance.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Water and Environmental Quality

2. Brief summary about Planned Program

Water is Idaho's most important natural resource. Agricultural practices influence the quality of water and other natural resources in our state. The protection of both the quantity and the quality of water and other resources is a high priority based on citizen surveys. The three major general areas of resource research and extension programming priorities addressed by this team are: (1) watershed management, (2) drinking water and human health, and (3) water conservation and management. Diverse research and extension programs are planned to address these issues and issues related to environmental quality. However, much of the water and environmental quality programming are reported under other team efforts. For instance many of the nutrient and animal waste management programs are reported under the nutrient and waste management theme area.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 10% Soil, Plant, Water, Nutrient Relationships
- 104 5% Protect Soil from Harmful Effects of Natural Elements
- 111 20% Conservation and Efficient Use of Water
- 112 20% Watershed Protection and Management
- 132 5% Weather and Climate
- 133 10% Pollution Prevention and Mitigation
- 215 10% Biological Control of Pests Affecting Plants
- 315 5% Animal Welfare/Well-Being and Protection
- 723 10% Hazards to Human Health and Safety
- 803 5% Sociological and Technological Change Affecting Individuals, Families and Communities

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The Pacific Northwest is a dynamic region that is rapidly undergoing change; the situation in the State of Idaho is similar. This change creates many land use planning challenges to protect existing resources. A major concern is protecting both the quality and quantity of Idaho’s water and other natural resources. The need for this program is as follows:
Idaho is third fastest growing state in the USA as population growth exceeded 29% over the last decade
Idaho population growth is across both urban and rural counties
People in the Pacific Northwest are more likely to show pride in their living environment than in any other region of the USA
Trends toward larger animal operation facilities are perceived to have an impact on water and other natural resources
Trends toward ranchette proliferation impacts water and other natural resources
Increased pressures on elected officials to meet local needs as populations grow
Lack of any formal resource and land use training by most elected county commissioners, zoning administrators or local zoning boards
The University of Idaho College of Agricultural and Life Sciences has the opportunity to play a major role in water and natural resource education of the public and community leaders who are involved in the land use planning which impacts the future of Idaho’s water resources.Recent surveys conducted by the University of Idaho have indicated that Idaho citizens consider water to be the state’s most important natural resource. Over 90% of state residents consider clean drinking water, clean rivers and clean groundwater to be high priority issues. In addition, over two-thirds of state residents consider water for agriculture, water for power generation, water for economic development, loss of wetlands, prevention of salmon extinction and watershed restoration high priorities. Idaho residents want information about these issues so that they can make informed policy decisions. Over 50% of

survey respondents indicated a desire for educational programs that address the above water issues. In particular, the public wants easily accessible water-related information form media such as the web, television, radio and newspapers.Pollutants such as pesticides, nitrates, heavy metals, and pathogens entering groundwater and surface waters may pose health hazards to local communities. Groundwater is the primary source of drinking water for most of the private and public water supplies in Idaho. Groundwater is generally more reliable both in quantity and quality than surface water. As a result it is generally less expensive and more reliable to develop a groundwater source. Consequently, 95% of Idahoans obtain their drinking water from groundwater sources. Public water supplies are regularly tested under the provisions of the Safe Drinking Water Act; however, private wells are generally not tested on a regular basis since testing is not required. The failure of onsite sewage systems, excessive fertilizer or animal manure applications are a particular threat to human health, especially in areas where surface waters or shallow well supplies are used for drinking ore recreation. Nitrates and arsenic in drinking water are of particular concern in Idaho.

2. Scope of the Program

- Multistate Research
- In-State Extension
- Multistate Integrated Research and Extension
- Multistate Extension
- Integrated Research and Extension
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Water quality, water quantity, and general environmental quality will continue to be issues that not only impact human health and safety within the state but are key to the future of economic development. We assume that adequate funding, from CSREES and other government sources, will continue for water quality and IPM programs at the PNW Land Grant Universities. We also assume that USDA Farm Bill incentives will continue for water quality protection, pest management, nutrient management, and environmental quality programs.

2. Ultimate goal(s) of this Program

It is the goal of the water resource team to develop through research and deliver through Extension water and environmental research information that will enable citizens to proactively protect waters of the state and to improve their quality of life.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	0.8	0.0	6.8	0.0
2009	0.8	0.0	6.8	0.0
2010	0.8	0.0	6.8	0.0
2011	0.8	0.0	6.8	0.0
2012	0.8	0.0	6.8	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Based on stakeholder input (regional survey conducted in 2002) educational activities will be conducted in the following formats: (1) PNWWATER UPDATES, (2) internet transmission using our web site (pnwwaterweb.com), (3) public service announcements, (4) satellite broadcast, (5) regional research and extension conferences, and (6) publications. Research findings will be presented (1) in referred scientific journals, at professional scientific meetings, (3) in PNWWATER UPDATES, and (4) on appropriate web sites.Development and distribution of 24 PNWWATER UPDATES per year. These updates will address current relevant topics in

water and environmental resources within the region and will be sent to key stakeholders and be available on our web site: pnwwaterweb.com.Annual regional satellite broadcast conference on a watershed management based theme.Annual regional integrated research and Extension conference dealing with watershed management.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Group Discussion • Education Class • One-on-One Intervention • Demonstrations	• Public Service Announcement • Web sites • TV Media Programs • Newsletters • Other 1 (e-mail)

3. Description of targeted audience

The main target audience is the general public living in rural and developing areas of Idaho.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	1200	220000	200	40000
2009	1200	220000	200	40000
2010	1200	220000	200	40000
2011	1200	220000	200	40000
2012	1200	220000	200	40000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 1 **2009 :** 0 **2010 :** 1 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	1	7
2009	1	7
2010	1	7
2011	1	7
2012	1	7

V(H). State Defined Outputs

1. Output Target

- Satellite Conferences delivered

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

- WQ Updates

2008 : 24 **2009 :** 24 **2010 :** 24 **2011 :** 24 **2012 :** 24

- Number Commodity Schools including water-quality presentations (including applicator training)

2008 : 6 **2009 :** 6 **2010 :** 6 **2011 :** 6 **2012 :** 6

- Delivery of Regional Water Quality Conference

2008 : 1 **2009 :** 1 **2010 :** 1 **2011 :** 1 **2012 :** 1

- Extension publications; peer reviewed (Bulletins, CIS, etc.)

2008 : 5 **2009 :** 5 **2010 :** 5 **2011 :** 5 **2012 :** 5

- Number of Popular press articles published

2008 : 12 **2009 :** 12 **2010 :** 12 **2011 :** 12 **2012 :** 12

- Number of Refereed journal articles published

2008 : 3 **2009 :** 3 **2010 :** 3 **2011 :** 3 **2012 :** 3

- Number of water quality workshops and seminars

2008 : 10 **2009 :** 10 **2010 :** 10 **2011 :** 10 **2012 :** 10

- Number of professional meetings attended

2008 : 10 **2009 :** 10 **2010 :** 10 **2011 :** 10 **2012 :** 10

V(I). State Defined Outcome

1. Outcome Target

O: Improved protection of Ground Water Resource.I: Number of participants who are land owners and managers that adopt BMPs that protect groundwater.

2. Outcome Type : Change in Condition Outcome Measure

2008 : 100 **2009 :** 150 **2010 :** 200 **2011 :** 250 **2012 :** 300

3. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 215 - Biological Control of Pests Affecting Plants
- 723 - Hazards to Human Health and Safety

1. Outcome Target

O: Improved protection of surface water resource.I: Number adopting BMPs to reduce runoff of sediment and nutrients.

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	1000	1500	2000	2500

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 215 - Biological Control of Pests Affecting Plants

1. Outcome Target

O: An increase in the number of trained graduate students prepared to enter the workforce.
I: Number of M.S. and Ph.D. candidates in water and environmental quality graduate training programs.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
7	7	7	7	0

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management
- 132 - Weather and Climate
- 133 - Pollution Prevention and Mitigation
- 215 - Biological Control of Pests Affecting Plants
- 315 - Animal Welfare/Well-Being and Protection
- 723 - Hazards to Human Health and Safety
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

O: Improve protection of water resources.
I: Number of pest management and nutrient management plans written with producers.

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	150	200	250	300

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 215 - Biological Control of Pests Affecting Plants

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Programatic Challenges
- Government Regulations

Description

External factors are not expected to significantly affect or alter the proposed plan of work in water resources except for the possibility of a terrorist incident involving using the drinking water supply as a means to transmit a biological or chemical weapon.

V(K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Time series (multiple points before and after program)

Description

Surveys of public attitudes, aptitudes and actions toward the water resource in Idaho were conducted in 2002 to set base line data. Public mail surveys are planned in 2007, 2009 and 2011 to measure actions taken by the public since 2002 to protect surface and groundwater resources of the state. The following demographic data will be collected from all surveyed respondents: age, gender, education level, community size, length of residence, and occupation. The Dillman mail survey methodology will be used as the evaluation process.Retrospective surveys for Pesticide applicator training participants and Master Gardeners.

2. Data Collection Methods

- On-Site
- Whole population
- Mail

Description

Data will be collected randomly from Idaho residents. We will purchase addresses from a commercial company that specializes in mail surveys. Again, people attending our educational programs will have their literacy about water and/or environmental issues evaluated by surveys. The surveys will be conducted at the end of educational programs and by mail. The questions will be similar to those asked on our baseline 2002 survey so that we can measure both progress and change.

Data for program evaluation will be collected on-site at pesticide applicator training events and specific lessons in Master Gardener training, using retrospective survey instruments.