## COVER SHEET FOR GRANT PROPOSALS

**State Board of Education**

<table>
<thead>
<tr>
<th>SBQE PROPOSAL NUMBER:</th>
<th>AMOUNT REQUESTED: $49,770</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be assigned by SBQE)</td>
<td></td>
</tr>
</tbody>
</table>

**TITLE OF PROPOSED PROJECT:** Enhancing Propagation Capability to Accelerate the Commercialization of Domesticated Native Plants

**SPECIFIC PROJECT FOCUS:** The objective of this project is to facilitate the transference of domesticated native plant germplasm from UI to the Idaho nursery industry. Specifically, funds will be used to establish breeder and foundation seed production facilities.

<table>
<thead>
<tr>
<th>PROJECT START DATE:</th>
<th>PROJECT END DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 Feb 2011</td>
<td>30 Jun 2011</td>
</tr>
</tbody>
</table>

**NAME OF INSTITUTION:** University of Idaho, College of Agricultural and Life Sciences

**DEPARTMENT:** Aberdeen R & E Center

**ADDRESS:** 1553 S 2700 W, Aberdeen, ID 83210

<table>
<thead>
<tr>
<th>E-MAIL ADDRESS:</th>
<th>PI PHONE NUMBER: 208-397-4181</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:stlove@uidaho.edu">stlove@uidaho.edu</a></td>
<td></td>
</tr>
</tbody>
</table>

### NAME: **Stephen L. Love**

**TITLE:** Professor

**SIGNATURE:**

### CO-PRINCIPAL INVESTIGATOR

### CO-PRINCIPAL INVESTIGATOR

### CO-PRINCIPAL INVESTIGATOR

### CO-PRINCIPAL INVESTIGATOR

### NAME: **Polly Knutson**

**SIGNATURE:**

**Authorized Organizational Representative**

**SIGNATURE:**

### Additional Information

1
Enhancing Propagation Capability to Accelerate the Commercialization of Domesticated Native Plants

A Project of the University of Idaho’s College of Agricultural and Life Sciences (CALS)

Executive Summary:

Researchers at the University of Idaho’s (UI) Aberdeen R & E Center have developed a unique and valuable pool of domesticated native plant materials for use in the nursery and landscape industry. This technology is ready for exploitation. The University of Idaho’s Office of Technology Transfer is negotiating a contract with a viable partnering company to market an initial offering of native plant products. The industry partner, Conservation Seeding and Restoration, Inc. (CSR) is proposing a spin-off subsidiary company called “Native Roots, LLC” to market native plants for landscaping purposes.

The single most significant barrier to commercialization is lack of an intact system for transferring adequate quantities of propagation material (mostly seed) to CSR. The need is to establish productive Breeder and Foundation seed blocks, and enhance seed cleaning and handling capabilities. For all publicly produced plant varieties, the university is responsible for producing early generation propagation material in the form of Breeder and Foundation seed. Greater quantities of high quality seed will translate to an accelerated rate of technology adoption.

This technology consists of unique and valuable domesticated native plant germplasm selected specifically for the Idaho nursery and landscape industry. These native plant materials are designed to fill emerging market needs driven by increased public desire for environmental stewardship and water conservation. If germplasm transfer can be streamlined to create market products, current market trends identified by CSR, Inc and defined in market analysis developed by students at the University of Idaho, show potential gross income in a range of $500K to 1M in the first two years of business. Over the course of the following five years, a potential expansion could result in a $10-15M market.

Department of Defense Readiness Level for this technology is considered 8-9 (i.e.}
system/subsystem development to launch and operations).

"Gap" Project Objectives and Total Amount Requested:

The objective of this project is to enhance the transference of domesticated native plant germplasm from UI to the Idaho nursery industry, with two specific sub-objectives:

1. Develop a "breeder" seed production and increase system to facilitate the transfer of valuable germplasm from the University of Idaho to a private partner nurseryman.  
   (Breeder seed is the original, principle source of propagation material for plant varieties.)

2. Establish a public/private cooperative "foundation" seed production system that is compatible with product improvement and preparation for product sales. (Foundation seed is the second generation of propagation material used for commercialization of new plant varieties.)

Total SBOE funding request: $49,770

Name of the Idaho Public Institution:
University of Idaho, College of Agriculture and Life Sciences (CALS)

Name of the Faculty Member (PI) Directing the Project:
Dr. Stephen L. Love  (see abbreviated CV, Appendix 4)

Resource Commitment/Institutional Priorities:

The mission of the University of Idaho is to, "...serve students, business and industry, the professions and public sector groups throughout the state and nation as well as diverse and special constituencies. The university has specific responsibilities in research and extension related to its land-grant function. The CALS mission is to, "advance the health and welfare of people, animals and the environment through research and education in agriculture, community, human and rural development, natural resources, nutrition and the life sciences.

This project, which extends a land grant based horticultural research program into the private sector, is intertwined with all aspects of UI and CALS missions. It will provide direct service and
improved profitability to the Idaho nursery industry, improve rural development in places where this industry resides, and increase environmental stewardship in the state.

**Impact on Idaho’s Economy:**

The production and distribution of native plant products through a partner-sponsored subsidiary called “Native Roots” will have positive short- and long-term, direct and indirect economic impacts within the state of Idaho. From the outset, direct sales of goods plus the licensing and marketing of the research and products created under the Native Roots umbrella, as such, will provide direct income plus a vigorous and viable tax stream for the state of Idaho.

- Development of Native Roots products for branding and distribution will provide an immediate and certain opportunity for a licensing nursery in the Magic Valley.
- Development of a line of products proprietary to Idaho’s nurseries will impact target markets, including in-state retailers and adjoining inter-mountain region markets.
- An immediate consequence of establishing the Native Roots product line and brand will be local work force development in the Magic Valley, including no less than 10 full-time, fully-benefited jobs, and as many as 25 seasonal labor positions.
- The development of a local source for increasing and distributing the unique plant materials husbanded by the University of Idaho provides for an immediate increase in the tax base in the Magic Valley, largely through capital expenditures.
- Many products will have appeal and utility beyond Idaho state boundaries. These will be marketed through the Grown in Idaho and the Idaho Preferred programs.

**Partnerships/Company Creation:**

The University of Idaho’s Office of Technology Transfer is negotiating a contract for this technology with a Kimberly, Idaho company, Conservation Seeding & Restoration, Inc. (CSR). CSR executives propose to spin off a subsidiary to capitalize on native plant products for the landscape industry and plan to call the new company “Native Roots, LLC”.

**Market Opportunity:**
Need: The American marketplace is being remodeled by public concern over environmental stewardship (the “green” movement). The result is expanding opportunities for marketing new concepts in landscape design, installation, and maintenance. When combined with present and future economics of water consumption – short supply and rising cost - coupled with projected continuing growth and development in the western United States – the situation creates a real need for an altered plant pallet. An updated pallet must offer the traditional appearances and familiarity while satisfying environmental concerns. Ultimately, the need is for an assortment of attractive, high quality native plants that perform in a consistent, uniform manner.

Applications and Markets: Demand for native plants is currently being driven by pioneering landscape professionals employing design concepts founded upon the following principles:

- Wise water use within developed landscapes.
- Landscaping designed to create harmony between developed and natural areas.
- Landscaping that encourages wildlife to inhabit developed areas.

In creating this native plant technology, plants were selected for the following attributes: drought tolerance; cold tolerance; striking foliage, branching, and/or seeds; clear or unusually-colored blooms; long bloom period; striking fall color; compactness, a naturally kempt habit; non-invasiveness; and appropriateness to a western landscape. As a result, Native Roots plants will be innately adapted to their environment. They are aimed at altering the choices available to consumers of landscape plants. As a company, Native Roots will thrive in the marketplace because these plants raise the bar beyond attractive to practical + attractive.

Native Roots will artfully resolve real issues in landscaping, using natural products. The product lines will allow customers to align an extraordinary set of landscaping needs, e.g. lower water use and preservation of familiar urban/suburban American landscaping styles, while improving upon our ability to blend development into western wildlands. In today’s “green” market climate, the demand for this concept can only grow.

Audience, Competition, Barriers to Market Entry: Initially the end consumer for “Native Roots” products is the homeowner purchasing through landscape garden centers, landscapers,
and landscape architects. Ultimately, the target markets for "Native Roots" include large retailers - the number one, two and three largest sellers of plants in the U.S - Home Depot, Lowe's, and Wal-Mart. However, smaller retailers, garden centers, and companies that serve as seasonal garden centers historically adopt new plants and offer the fastest entry into the marketplace.

Current market trends identified by CSR, Inc and detailed market analysis of University of Idaho students show potential gross income in a range of $500K to 1M in the first two years of business. Over the course of the following five years, a potential expansion could result in a $10-15M market. The greatest obstacle to successful market development is the time required to expand small quantities of breeder seed to levels that will allow market impact.

Currently, competition in this marketplace includes all retailers in the traditional plant market. The barriers for market entry are quite low, but include the lack of shelf space available to a new, unproven plant pallet. It is important to note that the retailers are asking for this type of product and making available space on shelves in an attempt to market native plants. CSR, Inc., the parent company of "Native Roots", is currently selling to and successfully marketing a native plant pallet, one that is much less predictable to the end consumer. Native Roots being the next iteration of native, market resistance is expected to be low.

The most critical barrier to marketing the native plant palette will be lack of familiarity with the plant materials being sold (impacting both market recognition and applied landscape maintenance practices). A forward education program will be necessary to ensure consumer satisfaction and product success on the ground.

The Technology:

The technology consists of intellectual property in the form of domesticated and improved native plants. According to plan, 25 to 30 plant products will initially be exploited by Native Roots (See Appendix 1). In time, additional selections and species will be transferred upon partner request as the domestication process continues.

The plants that make up this technology are unique and extremely valuable. They have been
subjected to limited improvement strategies which result in unique and distinct plant germplasm with value far greater than plants derived from wild-collected seed. No other source of improved native plants – suitable for landscape use and adapted to Idaho’s climates and soils – is available. See photographs in Appendix 2.

**Commercialization Partners:**

Conservation Seeding and Restoration, Inc. of Kimberly, Idaho is the partner of choice for marketing UI native plant products. CSR is a profitable native plant nursery with separate divisions for wildland restoration, nursery sales, and landscape design. Led by owner Steven Paulsen, CSR has been in operation since 2003 and is one of the most successful and profitable native plant nurseries in Idaho. CSR proposes to spin off a subsidiary company specifically designed to market improved native plants for the landscape industry. The new company will be called “Native Roots, LLC”.

Among its employees, CSR has a unique range of expertise, including native plant propagators, native plant marketers, and native plant landscape designers/installers. CSR is in a unique position to aggressively market the improved native plants being developed at the Aberdeen R & E Center.

**Project Plan/Detailed Use of Funds:**

There exists one critical barrier to successful transference of this technology from UI to Native Roots, namely the ability to produce high quality breeder and foundation seed. Without these two seed increase phases, inadequate seed will be available for commercialization to proceed (Figure 1). At UI, seed productions systems for agronomic crops (wheat, barley, potatoes, etc.) are institutionalized. University breeders produce and maintaining breeder seed of released varieties and research centers grow and sell foundation seed to the agricultural industry.
Figure 1. Gap procedures for transfer of native plant material from UI to CSR.

Due to large numbers of prospective products, limited UI resources, and the need for relatively small quantities of foundation seed, this native plant technology does not fit the typical seed production/certification model. Very limited quantities of experimental seed are the natural by-product of the research. From this seed, breeder seed production is being initiated at the Aberdeen R & E Center. However, limited land facilities and lack of personnel prohibit the production of foundation seed at the Aberdeen R & E Center. In its role as partner, Native Roots will participate in and assist with foundation seed production at their new production nursery in Kimberly, Idaho.

The foundation seed block will be critical for the final steps of product improvement by UI researchers. Plants in the foundation seed block will be subjected to the final phases of selection and improvement and the block will be a jointly operated segment of the partnership. In summary, under the UI-Native Roots partnership, new germplasm development (step 1) and production of breeder seed (step 2) will be conducted by UI researchers at Aberdeen. Production of foundation seed (step 3), located at the Native Roots production nursery in Kimberly will be a joint UI, Native Roots operation. Nursery propagation, production, and sales (step 4) will be the sole responsibility of Native Roots.

Some native plants will be propagated vegetatively through cuttings and divisions. These will
also be maintained in breeder stock blocks and new materials transferred to CSR as rooted plantlets. These will be established at Kimberly in cutting blocks to supply vegetative material for increase and marketing activities. A propagation mist chamber is needed at Aberdeen to facilitate the transfer of vegetatively propagated native plant species.

Funding from this grant is to be used to bridge the seed-related technology transfer barrier by completing the following tasks and improvements:

- Installation of weed barrier fabric and drip irrigation in breeder seed stock block.
- Purchase of seed cleaning equipment for use in managing breeder seed increases.
- Installation of an irrigation system at the Kimberly product improvement plot/foundation seed stock block.

**Education and Outreach:**

The University of Idaho native plant domestication project has provided unique educational opportunities for students and the general public, including:

- The initial business concept and plan for “Native Roots” was developed by a team of UI and Washington State University students. This plan was presented at several regional competitions and subsequently adopted by CSR.

- High school and undergraduate students provide summer labor for the project, thereby advancing their knowledge in biological and agricultural sciences. One high school student made the determination to seek a degree in horticulture based on experience with the project.

- Continuous educational efforts are made through outreach programs with intent to teach homeowners and land managers concepts and techniques of landscaping for water conservation. Information transfer has been through field days, demonstration gardens, web sites, and publications.
<table>
<thead>
<tr>
<th>A. FACULTY AND STAFF</th>
<th>Rate of Pay</th>
<th>No. of Months</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Salaiz/ Support Scientist</td>
<td>$47,200</td>
<td>3</td>
<td>$11,800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% OF TOTAL BUDGET:</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>SUBTOTAL:</td>
<td></td>
<td></td>
<td>$11,800</td>
</tr>
<tr>
<td>B. VISITING PROFESSORS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% OF TOTAL BUDGET:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. POST DOCTORAL ASSOCIATES / OTHER PROFESSIONALS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% OF TOTAL BUDGET:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. GRADUATE / UNDERGRADUATE STUDENTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% OF TOTAL BUDGET:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### E. FRINGE BENEFITS

<table>
<thead>
<tr>
<th>Rate of Pay (%)</th>
<th>Salary Base</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>39%</td>
<td>$47,200</td>
<td>$4,600</td>
</tr>
</tbody>
</table>

**SUBTOTAL:** $4,600

### F. EQUIPMENT:

<table>
<thead>
<tr>
<th>Item/Description</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed cleaning equipment – Office Tester and Cleaner</td>
<td>$2,750</td>
</tr>
<tr>
<td>Seed cleaning equipment – South Dakota Seed Blower</td>
<td>$1,425</td>
</tr>
<tr>
<td>Seed cleaning equipment - Hammermill</td>
<td>$4,590</td>
</tr>
<tr>
<td>Mulch layer (for installing weed barrier fabric)</td>
<td>$1,795</td>
</tr>
<tr>
<td>Irrigation pump</td>
<td>$7,600</td>
</tr>
<tr>
<td>Irrigation pipe, valves, filters, application heads</td>
<td>$10,900</td>
</tr>
</tbody>
</table>

**SUBTOTAL:** $29,360

### G. TRAVEL:

<table>
<thead>
<tr>
<th>Dates of Travel (from/to)</th>
<th>No. of Persons</th>
<th>Total Days</th>
<th>Transportation</th>
<th>Lodging</th>
<th>Per Diem</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 - 3 day trips to Kimberly, ID, spring</td>
<td>2</td>
<td>3</td>
<td>$350</td>
<td>$60</td>
<td>$410</td>
<td></td>
</tr>
</tbody>
</table>

**SUBTOTAL:** $410

### H. Participant Support Costs:

<table>
<thead>
<tr>
<th>Category</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stipends</td>
<td></td>
</tr>
<tr>
<td>2. Travel (other than listed in section G)</td>
<td></td>
</tr>
<tr>
<td>3. Subsistence</td>
<td></td>
</tr>
<tr>
<td>4. Other</td>
<td></td>
</tr>
</tbody>
</table>

**SUBTOTAL:**
<table>
<thead>
<tr>
<th>I. Other Direct Costs:</th>
<th>Dollar Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Materials and Supplies (weed barrier fabric, seed cleaning supplies, parts for a mist chamber)</td>
<td>$3,600</td>
</tr>
<tr>
<td>2. Publication Costs/Page Charges</td>
<td></td>
</tr>
<tr>
<td>3. Consultant Services (Include Travel Expenses)</td>
<td></td>
</tr>
<tr>
<td>4. Computer Services</td>
<td></td>
</tr>
<tr>
<td>5. Subcontracts</td>
<td></td>
</tr>
<tr>
<td>6. Other (specify nature &amp; breakdown if over $1000)</td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL:</strong></td>
<td><strong>$3,600</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>J. Total Costs: (Add subtotals, sections A through I)</th>
<th>TOTAL:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>$49,770</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>K. Amount Requested:</th>
<th>TOTAL:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>$49,700</strong></td>
</tr>
</tbody>
</table>

Project Director's Signature: [Signature]
Date: 30 Nov 10
### A. INSTITUTIONAL / OTHER SECTOR DOLLARS

<table>
<thead>
<tr>
<th>Source / Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B. FACULTY / STAFF POSITIONS

Description

PI, Support Scientist, and Aberdeen R&E Center clerical and farm staff.

### C. CAPITAL EQUIPMENT

Description

Aberdeen R & E Center farm equipment (tractors, cultivation tools, sprayers, etc.) and Aberdeen R & E Center irrigation equipment.

### D. FACILITIES & INSTRUMENTATION

Description

PI and Support Scientist office space, greenhouse facilities for stock plant production; field space and all related support facilities for plant maintenance and seed production; sufficient laboratory space to install and operate seed cleaning equipment; and storage facilities for supplies, equipment, and seed.
Appendix 1. Native plant species/products proposed for initial transfer to the partner company.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Code</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg-leaf penstemon</td>
<td><em>Penstemon ovatus</em></td>
<td>Pn542</td>
<td>Blue flowers, long bloom period</td>
</tr>
<tr>
<td>Beardlip penstemon</td>
<td><em>Penstemon barbatus</em></td>
<td>Pn441</td>
<td>Red flowers, late summer bloom, tall</td>
</tr>
<tr>
<td>Venus penstemon</td>
<td><em>Penstemon venustus</em></td>
<td>Pn532</td>
<td>Purple flowers, very showy</td>
</tr>
<tr>
<td>Pine-leaf penstemon</td>
<td><em>Penstemon pinifolius</em></td>
<td>Pn463</td>
<td>Red flowers, short, long bloom period</td>
</tr>
<tr>
<td>Desert penstemon</td>
<td><em>Penstemon pseudospectabilis</em></td>
<td>Pn628</td>
<td>Pink flowers, long bloom period</td>
</tr>
<tr>
<td>Cardinal penstemon</td>
<td><em>Penstemon cardinalis</em></td>
<td>Pn615</td>
<td>Dark red flowers, tall plant</td>
</tr>
<tr>
<td>Sulfurflower buckwheat</td>
<td><em>Eriogonum umbellatum</em></td>
<td>Bw319</td>
<td>Yellow flowers, evergreen</td>
</tr>
<tr>
<td>Lacy buckwheat</td>
<td><em>Eriogonum corymbosum</em></td>
<td>Bw357</td>
<td>White flowers, late summer bloom</td>
</tr>
<tr>
<td>Oval-leaf buckwheat</td>
<td><em>Eriogonum ovalifolium</em></td>
<td>Bw329</td>
<td>Pink-red flowers, groundcover habit</td>
</tr>
<tr>
<td>James buckwheat</td>
<td><em>Eriogonum jamesii</em></td>
<td>Bw245</td>
<td>Yellow flowers, very long bloom period</td>
</tr>
<tr>
<td>Wyeth’s buckwheat</td>
<td><em>Eriogonum heracleoides</em></td>
<td>Bw301</td>
<td>White flowers, large flower clusters</td>
</tr>
<tr>
<td>Short-stem buckwheat</td>
<td><em>Eriogonum brevicaule</em></td>
<td>Bw358</td>
<td>Yellow flowers, summer-long bloom</td>
</tr>
<tr>
<td>Cusick’s hyssop</td>
<td><em>Agastache cusickii</em></td>
<td>Gh143</td>
<td>Light pink flowers, dwarf mint</td>
</tr>
<tr>
<td>Beebalm</td>
<td><em>Monarda menthaefolia</em></td>
<td>Gh115</td>
<td>Large purple flowers, reddish leaves</td>
</tr>
<tr>
<td>Sunset hyssop</td>
<td><em>Agastache rupestris</em></td>
<td>Gh146</td>
<td>Orange/purple flowers, late summer</td>
</tr>
<tr>
<td>Giant purple sage</td>
<td><em>Salvia pachyphyllus</em></td>
<td>Ps33</td>
<td>Dark purple flowers, fragrant foliage</td>
</tr>
<tr>
<td>Blueleaf columbine</td>
<td><em>Aquilegia scopulorum</em></td>
<td>Cb39</td>
<td>Blue flowers, dwarf, blue leaves</td>
</tr>
<tr>
<td>Western red columbine</td>
<td><em>Aquilegia Formosa</em></td>
<td>Cb51</td>
<td>Red/yellow flowers, tall</td>
</tr>
<tr>
<td>Desert columbine</td>
<td><em>Aquilegia desertorum</em></td>
<td>Cb71</td>
<td>Red flowers, long bloom period</td>
</tr>
<tr>
<td>Mat globemallow</td>
<td><em>Sphaeralcea caespitosa</em></td>
<td>Gm101</td>
<td>Orange flowers, groundcover habit</td>
</tr>
<tr>
<td>Blanketflower</td>
<td><em>Gaillardia aristata</em></td>
<td>Ad175</td>
<td>Red sunflowers, long bloom period</td>
</tr>
<tr>
<td>Sundancer daisy</td>
<td><em>Hymenoxys acaulis</em></td>
<td>Ad178</td>
<td>Bright yellow daisies, long bloom</td>
</tr>
<tr>
<td>Longfin evening primrose</td>
<td><em>Oenothera brachycarpa</em></td>
<td>Ot95</td>
<td>Large yellow flowers, daytime bloom</td>
</tr>
<tr>
<td>Serviceberry</td>
<td><em>Amelanchier alnifolia</em></td>
<td>Sv12</td>
<td>Dwarf, bright orange fall color</td>
</tr>
<tr>
<td>Oak-leaf sumac</td>
<td><em>Rhus trilobata</em></td>
<td>Sq3</td>
<td>Weeping habit, yellow-orange fall color</td>
</tr>
<tr>
<td>Rabbitbrush</td>
<td><em>Ericameria nauseosa</em></td>
<td>Rb22</td>
<td>Silver foliage, yellow fall flowers, dwarf</td>
</tr>
</tbody>
</table>
Appendix 2. Photographic Examples of Product-Ready Native Plants

- Short-stem buckwheat
- Blue-leaf columbine
- Lacy buckwheat
- Sundancer daisy
- Desert beardtongue
- Big purple sage
Appendix 3: Facilities and Equipment

The Aberdeen R & E Center is a premier site for agricultural research in southeastern Idaho. The center has all facilities needed to complete this research project, including:

Office facilities and equipment for the PI and technical personnel
Laboratory facilities (including space to set up seed cleaning equipment)
Allocated greenhouse facilities
Allocated field space with access to irrigation
Equipment for routine field work (tractors, tilling equipment, sprayers, harvesters, etc.)
Fabrication shop and personnel with expertise to build specialized equipment
Storage space for equipment and seed
Farm support staff assigned to routine field maintenance duties
Clerical support staff

The partner company, Conservation Seeding and Restoration, Inc. is a highly successful nursery with many years of experience in marketing native plant products. CSR has established facilities for completing the production and marketing activities of the project, including:
Land for production activities (including a new farm for the Native Roots subsidiary
Greenhouse facilities and propagation equipment
A retail marketing facility
Storage and handling facilities for native plant seed
Personnel with expertise in propagation, native plant landscape design, and native plant sales
Appendix 4: Biographical Sketch

Curriculum Vitae – Stephen L. Love

Education and Training

• 1980 B.S., Brigham Young University, Provo, UT
• 1984 Ph.D., Clemson University, Clemson, SC

Research and Professional Experience

• 2005-present, Team Leader, Commercial and Consumer Horticulture Team, University of Idaho
• 2000-present, Superintendent of the Aberdeen R & E Center, University of Idaho
• 1998-present, Research and Extension Professor of Horticulture, Department of Plant, Soil, and Entomological Sciences, University of Idaho
• 1993-98, Associate Research Professor of Crop Science, Department of Plant, Soil, and Entomological Sciences, University of Idaho
• 1985-93, Assistant Research Professor of Crop Science, Department of Plant, Soil, and Entomological Sciences, University of Idaho
• 1984-85, Post-Doctoral Research Associate, Department of Horticulture, Clemson University, Clemson, South Carolina
• 1981-84, Research Assistant, Department of Horticulture, Clemson University, Clemson, South Carolina

Professional Activities, Honors and Awards

• Technology Transfer Award, Federal Consortium for Technology Transfer, 2002
• Outstanding Paper Award, Potato Association of America, 1998
• President’s Certificate of Appreciation, Potato Association of America, 1997
• Certificate of Appointment, Plant Variety Protection Board, 1995
• State Team Award, Epsilon Sigma Phi, 1991
Grants Received

Since 2000, a total of 79 grants have been acquired totaling $2,883,017. Granting agencies include federal, state, and private entities. Current funding support includes:

- Evaluation of Native and Adapted plants for Landscape Use, Stephen L. Love, $10,920, 2009, Idaho Department of Agriculture Nursery and Florists Grant Program.
- Evaluation of Native and Traditional Turfgrass Species for Low-maintenance Lawns, Thomas Salaiz and Stephen L. Love, $5,050, 2009, Idaho Department of Agriculture Nursery and Florists Grant Program.
- Native sod production. Thomas Salaiz, Stephen Love, Paul Johnson. $12,000, 2009. USDA/CSREES.
- Studies on Billbug Control, Thomas Salaiz and Stephen L Love, $12,500, 2009, DuPont Crop Protection, ValenT USA Corp., Bayer Environmental Science, Syngenta
- Tree insect control. Thomas Salaiz and Stephen L Love, $1,000, 2009, Bayer Corp.
- Selection and Breeding of Native and Adapted Plant Varieties for Sustainable Southern Idaho Landscapes, Stephen L. Love, $2,520, 2009, Hatch Funds.
- Living on the Land Stewardship Education Program, Kevin Laughlin, Cinda Williams, Mike Thornton, Others, $157,019 over four years, spending authority, $30,000, 2006-2009, USDA/SARE Program.

Pertinent Refereed Publications

Appendix 5: Letter of Support from Partner Company

Coming, will be included at the time of submission
December 2, 2010

To Whom It May Concern:

"Restoring the West one native plant at a time."

Seems simple enough. Plant native plants back where they belong. Why? Because we believe for the West to continue to develop and thrive, we must ask less of its finite resources.

Ten years ago when Conservation Seeding, and Restoration, Inc., was founded, the concept of restoring native plants into areas of the West altered by development seemed odd, perhaps, to all but those involved in extracting the vast resources of the West, and to a number of individuals looking toward a sustainable future.

Today, we at CSR, Inc. know we no longer represent a fraction of a minority. Today we find that people from all walks of life understand the wisdom of our vision.

Fortunately for us all, at about the same time CSR began native restoration work, Dr. Stephen Love and the University of Idaho began developing plants selected from the wild that were designed to fill the needs of the modern West, and more importantly, the demands of the West in the future.

The work being done on native plants at the U of I is extremely exciting and important to us at CSR, Inc., as it aligns perfectly with our past, present, and future business direction. Already, we have laid much of the infrastructure and groundwork necessary to meet the anticipated demand for these types of native plant products. By assisting in furthering the development of Dr. Love's technical innovations, we recognize the opportunity to cut the development time of products intended for that market quite significantly.

Students at the University of Idaho have measured the potential demand, in the foreseeable future, for plants serving the native market at 10-15M.

We agree that those sales figures are attainable within the next five to ten years. Right now, we grow native plant material from seeds and cuttings we collect from our own stock, and we also collect from public and private lands in Idaho and surrounding states (properly permitted, of course). We ship our inventory to nurseries based in suburban markets throughout the state, and to a chain of ranch supply stores in the northwest. The products we sell represent only what nature has to offer – warts and all. The work currently being done at the University of Idaho has far greater appeal and value.
Demand for our products continues to grow. However, interest in new introductions of native plants suited to western developed landscapes is greater still. Dr. Love has found and stewarded products precisely aimed at where we, and many in the nursery and greenhouse industry, believe the future of horticulture and landscaping lies - low cost sustainability found best in select native plants. Particularly in the West, we can no longer afford to design and maintain landscapes predicated on western European ideals that are centuries old. We need a new palette that serves more than just aesthetics.

To successfully enter the cluttered markets of landscaping and gardening, we need the opportunity to create a brand with enough impact to gain the attention of consumers. Students from the University of Idaho have dubbed the brand as the “Native Roots” line. We think that an excellent start that can be readily sold. All we need is the product.

To obtain the needed product, we must first increase Dr. Love’s stock base from a handful of seeds into a quantity of starter plants sufficient to serve all of the nurseries in and surrounding Idaho - and beyond. In our estimation, several of Dr. Love’s selections will have utility and appeal nationwide. To develop a stock base large enough to serve potential demand, will require significant investment in time and money. In nature, there is no substitute for time. We all know how that translates in the world of business.

We believe Dr. Love’s work to be strong enough to alter how we garden and landscape in the West. To go further, we believe Dr. Love’s work to be strong enough to alter how we live. The people of Idaho, the State of Idaho, and the University of Idaho stand to be the ones to benefit the most. We ask only for the opportunity to further the process, and look forward to the opportunity.

Sincerely,

[Signature]

Steven R. Paulsen
Owner/General Manager
Conservation Seeding & Restoration, Inc.
Appendix 6: Full PI CV

CURRICULUM VITAE
University of Idaho

NAME: Love, Stephen L.

RANK OR TITLE: Research Professor of Crop Science

DEPARTMENT: Plant, Soil, and Entomological Sciences

OFFICE LOCATION: Aberdeen R & E Center
1693 S. 2700 W.
Aberdeen, ID 83210

DATE: November 2, 2009

OFFICE PHONE: (208) 397-4181
FAX: (208) 397-4311
EMAIL: slove@uidaho.edu

DATE OF FIRST EMPLOYMENT AT UI: April 1, 1985

DATE OF TENURE: April 23, 2001

DATE OF PRESENT RANK OR TITLE: July 1, 1998

EDUCATION BEYOND HIGH SCHOOL:

Ph.D., Plant Physiology, 1984, Clemson University
B.S., Horticulture, 1980, Brigham Young University

EXPERIENCE:

Teaching and Research Appointments:

1998-present, Research Professor of Crop Science, Department of Plant, Soil, and Entomological Sciences, University of Idaho
1993-98, Associate Research Professor of Crop Science, Department of Plant, Soil, and Entomological Sciences, University of Idaho
1985-93, Assistant Research Professor of Crop Science, Department of Plant, Soil, and Entomological Sciences, University of Idaho
1984-85, Post-Doctoral Research Associate, Department of Horticulture, Clemson University, Clemson, South Carolina
1981-84, Research Assistant, Department of Horticulture, Clemson University, Clemson, South Carolina

Academic Administrative Appointments:

2000-present, Superintendent, Aberdeen R&E Center, University of Idaho

TEACHING ACCOMPLISHMENTS:

Courses Taught:

PISC 490/590, Potato Science, Fall 1999, Fall 2001
PISC 404/504, Vegetable Crops, Fall 2000, Fall 2004, Fall 2006, Fall 2008
PISC 302, SportsTurf, Fall 2005 (Assisting T. Salaiz)
PISC 502, Potato Cropping Systems (taught 2 lectures for Brian Hopkins)

Students Advised:

Graduate Student Activity:
Member of Graduate Student Faculty, 1991-present
Research advisor to Larry Turgoose - completed a Ph.D. in Education Administration in 1996.

Graduate Committee Chair:
Thomas Salaiz, PhD (starting January 2009)
Donghan Khu, Ph.D., May 2006.
Khaliq Zaman, M.S., December 1990.

Courses Developed:

Compressed video course in Vegetable Crops, PISC 404/504
Compressed video course in Potato Science, PISC 490/590

SCHOLARSHIP ACCOMPLISHMENTS:

Potato Variety Releases:

Premier Russet. Released in 2006, jointly with the USDA-ARS and the experiment stations of Oregon and Washington.
Western Russet. Released in 2003, jointly with the USDA-ARS and the experiment stations of Oregon and Washington.
Defender. Released in 2003, jointly with the USDA-ARS and the experiment stations of Oregon and Washington.
Summit Russet. Released in 2002, jointly with the USDA-ARS and the experiment stations of Oregon and Washington.
Alturas. Released in 2001, jointly with the USDA-ARS and the Experiment Stations of Oregon and Washington.
Ivory Crisp. Released 2001, jointly with the USDA-ARS and the Experiment Stations of North Dakota, Oregon and Washington.
Gem Russet. Released in 2000, jointly with the USDA-ARS and the Experiment Stations of Colorado, Oregon, and Washington.
IdaRose. Released in 2000, jointly with the USDA-ARS and the Experiment Stations of Colorado, Oregon and Washington.
Bannock Russet. Released in 1999, jointly with the USDA-ARS and the Experiment Stations of Oregon and Washington.

Refereed Publications:

Books:


Book Chapters:


Journals:


Journals (cont.):


Proceedings:


Bulletin and Current Information Series:


Peer Reviewed/Evaluated Publications:

Book Chapters:

Managing Pests in Potatoes. 2006. Revision of chapter 2, in cooperation with other authors, on the new 2nd Ed. of Integrated Pest Management for Potatoes in the Western United States, University of California.

Journals:


Proceedings:


Abstracts:


published by the University of Idaho. Amer. J. Potato Res. 81:72-73.


Other Publications:

Newsletters:


Proceedings:


Magazines:

Magazines (cont.):


Web Pages/Sites:

SL Love. 2008. Choosing tomato varieties for your home garden. Published in the UI sponsored web site “Idaho Landscapes and Gardens”.
Love, S.L. 2007. Summer pruning. Published in the UI sponsored web site “Idaho Landscapes and Gardens”.
Salaiz, T.A. and S.L. Love. 2007. Fall Lawn Care. Published in the UI sponsored web site “Idaho Landscapes and Gardens”.
Love S.L. 2006. Landscape Principles. Published in the new UI sponsored web site “Idaho Landscapes and Gardens”.
In cooperation with the Web Site Committee edited and improved the web site for Idaho Center for Potato Research and Education. (http://www.ag.uidaho.edu/potato).

Professional Meeting Papers:

Occurrence of high glycoalkaloid content progeny from low level parents A7816-14 and Russet Norkotah. Presented at the annual meeting of the Potato Association of America, Scottsbluff, Nebraska, August 2004.

Presentations at State, National, and International Meetings:

International:

Invited:
The future of specialty potato varieties. Presented and panel discussion at the World Potato Congress

Contributed:
Important quality characteristics in breeding processing potatoes. World Potato Congress. Amsterdam, The Netherlands. September 4-6, 2000.
Invited:

Contributed:
Defender: a high-yielding processing potato cultivar with foliar and tuber resistance to late blight. Presented as a poster at the annual meeting of the Potato Association of America, Calgary, Alberta, August 2005.
Development of russet-type germplasm with resistance to corky ringspot. Symposium on new potato diseases at the annual meeting of the Potato Association of America, St. Augustine, Florida, April 22-26, 2001.
Late season and storage. Presented as a panel at the Idaho Crop Production Fertilizer and Chemical Conference, Jackpot, Nevada, January 2003.
What is the Potato Association of America. 17th Annual San Luis Valley Potato/Grain Conference and Agricultural Trade Fair, 2000.

State:
Invited:
Woody Plants. Presented at the Franklin County Master Gardener Training, Preston, ID, February 2009.
Native Plants. Presented to the Bingham County Advanced Master Gardeners, Blackfoot, ID, July 2009.


Native Plant Evaluations. Presented as part of the Aberdeen R&E Center Twilight Tour, Aberdeen, ID, July 2009.


Collecting seed in the Seven Devils country. Presented to the Aberdeen Rotary Club, February, 2008.


Importance of Native Plants. Presented to students of Sorensen Elementary School, Couer d’Alene, ID, April, 2008.


Woody Plants. Presented at the Bonneville County Master Gardener Training, Idaho Falls, ID, March,
2007.


Horticulture and Turf Programs at UI. Presented to Leadership in Agriculture Tour, December, 2005.

Contributed:

Native Plants Workshop. Teamed with Stan Goertsema of Power County to train residents in the use of native plants in landscaping, American Falls, ID, April 2009.

Fruit Tree Pruning Workshop. Teamed with Stan Goertsema of Power County to train residents in proper pruning practices, American Falls, ID, April 2009.

Vegetable Gardening. Teamed with Stan Goertsema of Power County to train residents in principles of vegetable production, American Falls, ID, April 2009.
Presentations at State, National, and International Meetings (cont.):

Fruit Tree Pruning Workshop. Held locally to train residents in proper pruning practices, Aberdeen, ID, March 2009.

Rose Pruning Workshop. Held locally to train residents in practical rose pruning, Aberdeen, ID, April 2009.


Pruning Fruit and Landscape Pruning. Teamed with Bill Bohl and Kesler’s Greenhouse to train residents in proper pruning techniques, Blackfoot, ID, April 2009.


Fruit Tree Pruning Workshop. Teamed with Stan Goertsema of Power County to train residents in proper pruning practices, American Falls, ID, April, 2008.

Rose Pruning Workshop. Teamed with Stan Goertsema of Power County to train residents in practical rose pruning, Aberdeen, ID, April, 2008.


Tour of the Native Plant Project. Hosted the Southern Idaho FFA Youth Leaders in a tour of the native plant evaluation plots, Aberdeen, ID, April, 2008.


Tour of the Aberdeen Horticulture Projects. Organized for the Idaho Association of Agricultural County Agents as part of their annual meeting, Aberdeen, ID, June, 2008.

Tour of the Aberdeen Turfgrass Research Plots. Included discussions of UI horticulture programming at Aberdeen and elsewhere. Organized for the Southeastern Chapter of the Idaho Nursery and Landscape Association annual meeting, host by the Aberdeen R & E Center, Aberdeen, ID, August, 2008.


Bonneville County “Thaw n’ Awe” spring gardening workshop. Held in Idaho Falls, ID, March, 2008.

Work in Native Plant Research. Presented as part of a career day at William Thomas Middle School, American Falls, ID, October, 2008.


Vegetable Gardening – Crop Specific. Presented to a women’s church auxiliary group, Aberdeen, ID, April, 2006.


Grants and Contracts Awarded:

2009:

Evaluation of Native and Adapted Plants for Landscape Use, Idaho Department of Agriculture Nursery and Florists Grant Program. $10,920

Evaluation of Native and Traditional Turfgrass Species for Low-Maintenance Lawns, Idaho Department of Agriculture Nursery and Florists Grant Program. $5,050

Native Sod Production, USDA/CSREES. $12,000

Turfgrass Management and Insect Control, United States Golf Association. $3,000

Improvements on the Hardy Rose Evaluation Plots, Aberdeen Rotary Club. $420

Studies on Billbug Control, DuPont Crop Protection. $4,000

Studies on Billbug Control, Syngenta. $2,000

Studies on Billbug Control, Valent USA Corp. $5,000

Studies on Billbug Control, Bayer Environmental Science. $1,500

Tree Insect Control, Bayer Corp. $1,000

Selection and Breeding of Native and Adapted Plant Varieties for Sustainable Southern Idaho Landscapes, Hatch Funds. $2,520

Living on the Land Stewardship Education Program, USDA/SARE Program Jointly with Kevin Laughlin, Cinda Williams, Mike Thornton, $157,019 over three years, spending authority, $30,000, 2006-2008. $157,019

2009 Total $196,601
2008:

Evaluation of Native and Adapted Plants for Landscape Use, Idaho Department of Agriculture Nursery and Florists Grant Program. $11,355
Evaluation of Native and Traditional Turfgrass Species for Low-Maintenance Lawns, Idaho Department of Agriculture Nursery and Florists Grant Program. $3,753
Nursery Technical Resource Center, Idaho Department of Agriculture Nursery and Florists Grant Program. $16,561
Evaluation of Miscanthus Species for Dry Matter Production, Idaho National Laboratory. $6,500
Billbug Monitoring in Southern Idaho, United States Golf Association. $3,000
Establishment of Turfgrass Research Plots, Idaho Golf Course Association. $2,000
Improvements on the Hardy Rose Evaluation Plots, Rotary District 5400. $500
Studies on Billbug Control, Arysta Life Sciences. $2,500
Studies on Billbug Control, Syngenta. $2,000
Studies on Billbug Control, Valent Corporation. $3,500
Studies on Billbug Control, Valent Corporation. $4,000
Studies on Billbug Control, Bayer Corporation. $1,000
Tree Insect Control, Bayer Corporation. $2,500
Studies on Turf Weed Control, Monsanto Corporation. $5,000
Selection and Breeding of Native and Adapted Plant Varieties for Sustainable Southern Idaho Landscapes, Hatch Funds. $2,522
Living on the Land Stewardship Education Program, USDA/SARE Program Jointly with Kevin Laughlin, Cinda Williams, Mike Thornton, $157,019 over three years, spending authority, $30,000, 2006-2008. $157,019

2008 Total $223,710

2007:

Evaluation of Native and Adapted plants for Landscape Use, Idaho Department of Agriculture Nursery and Florists Grant Program. $11,635
Collection of Native Plants From the Seven Devils Region of Idaho, Idaho Native Plant Society. $970
Development of Markets for Specialty Potato Varieties, Idaho Potato Commission. $6,940
Development of Consumer Horticulture Education Videos, University of Idaho Extension, Jointly with Tony McAmmon. $3,000
Installation of Hardy Rose Garden Arbor, Rotary District 5400. $500
Studies on Billbug Control, Arysta Life Sciences, jointly with Tom Salaiz. $2,000
Studies on Billbug Control, Syngenta, jointly with Tom Salaiz. $1,600
Studies on Billbug Control, Bayer Corp., jointly with Tom Salaiz. $3,000
Studies on Billbug Control, DuPont, jointly with Tom Salaiz. $4,800
Billbug Monitoring, United States Golf Association, jointly with Tom Salaiz. $3,000
Tree Insect Control, Stephen L Love, Tom Salaiz, $4,000, 2007, Bayer Corp. $2,522/year
Selection and Breeding of Native and Adapted Plant Varieties for Sustainable Southern Idaho Landscapes, 2005 – 2010, Hatch Funds. $157,019
Living on the Land Stewardship Education Program, USDA/SARE Program Jointly with Kevin Laughlin, Cinda Williams, Mike Thornton, $157,019 over three years, spending authority, $30,000, 2006-2008. $157,019

2007 Total $196,986

2006:

Evaluation of Native and Adapted plants for Landscape Use, Idaho Department of Agriculture Nursery and Florists Grant Program. $11,820
Facilitation of Both a Statewide Arboretum Program and a New Plant Material Marketing System in Idaho, Idaho Department of Agriculture Nursery and Florists Grant Program. $4,835
Collection of Native Plants From the Owyhee Mountains for Evaluation as Landscape Plants, Idaho Native Plant Society. $770
Development of Markets for Specialty Potato Varieties, Idaho Potato Commission. $6,000
Establishment of a Hardy Rose Trial, Ifft Foundation $3,320

35
Establishment of a Memorial Rose Garden, Rotary District 5400. $500
Web Site Development – Community Horticulture in Idaho, University of Idaho Extension $9,700
  Jointly with Dan Barney, Bob Tripepi, Joanne Robbins, Marlene Fritz, Tom Salaiz, Don Pierce, Susan Bell.
Billbug Monitoring, Bayer and Arista Corporations, jointly with Tom Salaiz. $3,000
Establishment of Turfgrass Research Plots, Idaho Golf Course Superintendent’s Association $2,000
  Jointly with Tom Salaiz.
Selection and Breeding of Native and Adapted Plant Varieties for Sustainable Southern Idaho Landscapes, Hatch Funds. $2,522
Living on the Land Stewardship Education Program, USDA/SARE Program, over three years, $157,019
  Jointly with Kevin Laughlin, Cinda Williams, Mike Thornton, Others.
2006 Total $201,486

2005:

Specialty potato variety evaluation. Idaho Potato Commission. $6,000
Potato variety development and improvement in the Northwest. $507,247 for 1 year, UI share $169,082
  (commitment for 1 additional year). Jointly with J.C. Stark (UI), A. Mosley (OSU), N.R. Knowles and M. Pavek (WSU). USDA/CSREES.
Evaluation of advanced potato selections. For 1 year (ongoing) USDA/ARS. $40,100
Chipping potato variety trials (ongoing). R&G Potato. $12,000
Potato breeding research. Jointly with J. Whitworth and R. Novy, Idaho Potato Commission. $12,500
Snack Food Association chipping variety trials (ongoing). Snack Food Association. $3,000
2005 Total $242,682

2004:

Reducing exposure to drought risk in potato production systems, over two years. $185,306
Jointly with J. Stark, B. King, and C. McIntosh. USDA-RMA/RED.
Potato variety development and improvement in the Northwest. $562,000 for 1 year, UI share $167,300
  (commitment for 2 additional years). Jointly with A. Mosley (OSU) and R. Thornton (WSU). USDA/CSREES.
Evaluation of advanced potato selections, for 1 year (ongoing). USDA/ARS. $40,100
Chipping potato variety trials. (ongoing). R & G Potato. $12,000
Potato breeding research. Jointly with J. Whitworth and R. Novy. Idaho Potato Commission. $12,500
Snack Food Association chipping variety trials. (ongoing). Snack Food Association. $3,000
2004 Total $420,206

2003:

Automated potato grading system. Jointly with J. Miller. UI NSF EPSCoR instrumentation acquisition program. $37,675
Reducing exposure to drought risk in potato production systems. (over two years). $185,306
  Jointly with J. Stark, B. King, and C. McIntosh. USDA-RMA/RED.
Potato variety development and improvement in the Northwest. (for 1 year)
  with UI share $187,300. (commitment for 2 additional years). Jointly with A. Mosley (OSU)
  and R. Thornton (WSU). USDA/CSREES.
Evaluation of advanced potato selections. (for 1 year, ongoing). USDA/ARS. $40,900
Germplasm screening. USDA/ARS. (with renewal for 3 years). Jointly with D. Corsini. $8,000
Chipping potato variety trials. (ongoing). R & G Potato. $12,000
Potato breeding research. Jointly with J. Whitworth and R. Novy. Idaho Potato Commission. $12,500
Snack Food Association chipping variety trials. (ongoing). Snack Food Association. $3,000
2003 Total $823,706

2002:

Potato variety development and improvement in the Northwest. S.L. Love, A.R. Mosley, and R.E. Thornton. $186,666

  $560,000 with UI share $186,666. USDA/CSREES. One year with commitment for three additional years.
Evaluation of advanced potato selections. USDA-ARS. One year. $40,700
USDA-ARS germplasm screening. Jointly with D.L. Corsini. Four years. $8,000
Chipping potato variety trials. R&G Potato. One year. $12,000

2002 Total $259,866

2001:

Potato variety development and improvement in the Northwest. S.L. Love, A.R. Mosley and R.E. Thornton. $550,000 with UI share $185,000. USDA-CSREES. One Year with commitment for four additional years. $185,000
Evaluation of advanced potato selections. USDA/ARS. One year. $40,700
USDA-ARS germplasm screening. Jointly with D.L. Corsini. USDA/ARS. Four years. $8,000
Chipping potato variety trials. R&G Potato. One year. $15,000
Screening new potato varieties for response to maleic hydrazide. S.L. Love. Uniroyal $1,500
Discrimination of potato quality and processability. Jointly with K. Huber. Idaho Potato Commission. $28,074
Storage requirements for new and “potential release” cultivars for the potato industry. Jointly with G. Kleinkopf. Idaho Potato Commission. $27,000

2001 Total $317,774

2000:

Potato improvement and development in the Northwest. CSREES. One year. $166,000
Evaluation of advanced potato selections for agronomic and quality characteristics. USDA/ARS. One year. $41,200
Germplasm screening. USDA/ARS. Jointly with D.L. Corsini. One Year. $4,000
Chipping potato variety trials. R&G Potato. One year. $15,000
N and P requirements for Chipeta. R&G Potato. One year. $8,000
Discrimination of potato quality and processability. Jointly with K. Huber. Idaho Potato Commission. $24,877
Storage Requirements for new and “potential release” cultivars for the potato industry. Jointly with G. Kleinkopf. Idaho Potato Commission. $27,000

2000 Total $259,077
SERVICE:

Major Committee Assignments:

National:

    WERA-1013, Evaluation of Native Plants in the Intermountain Region, Founding Member 2008
    Chair, 2009
    Secretary, 2008
    Plant Variety Protection Advisory Board (Appointed by the U.S. Secretary of Agriculture), 1995-99
    USDA/ARS Program Review Committee, 2000

Regional:

    Western Regional Committee, 1985-present; Chair, 1987
    Computer Subcommittee, Chair, 1987-present
    Chipping Trial Subcommittee, Chair, 1987-present
    Northwest Potato Variety Development Committee, 1985-present
    Chair, 1992-93, 1997-98
    Secretary, 1991-92, 1996-97

University:

    Intellectual Property Rights Committee, 2003-present

College:

    Mentoring Committee, Ariel Agenbroad, 2008-present
    CALS Administrative Committee, 2007-present
    College of Agriculture Promotion and Tenure Committee, 2006-2008
    PSES Department Head Selection Committee, 2006
    Selection Committee, IAES Director, 2003
    Foundation Seed Stocks Committee, 1987-2005
    Potato Seed Allocation Committee, Chair, 1987-2005
    Potato Variety Selection Committee, Chair, 1986-2005
    Nuclear Seed Advisory Committee, 1986-2005

Departmental:

    Promotion and Tenure Committee, Michael Thornton, Chair 2009
    Selection Committee, Arboriculture Position, 2008
    Selection Committee, Potato Storage Physiology Position, 2008
    Selection Committee, Cropping Systems Position, 2008
    Curriculum Committee, 2007-present
    Mentoring Committee (Chair), Jianli Chen, 2008-present
    Selection Committee, Potato Storage Physiology Position, 2007
    Selection Committee, Wheat Breeding Position (Chair), 2007
    Selection Committee, Scientific Aide, Aberdeen, 2006 (Stark position 1)
    Selection Committee, Scientific Aide, Aberdeen, 2006 (Stark position 2)
    Plant Virologist Selection Committee, 2005
    Mentoring Committee (Chair), Jim Lorenzen, 2005
    Selection Committee (Chair), Cereal Agronomist, 2003
    PSES Curriculum Committee, 2003
    Mentoring Committee, Juan Alvarez, 2003-present
    Mentoring Committee, Jeff Miller, 2003-present
    Mentoring Committee, Nora Olsen, 2003
    Promotion and Tenure Committee, Phil Nolte, 2003
    Promotion and Tenure Committee, Kerry Huber, 2003
    Mentoring Committee, Juan Alvarez, 2001
    Potato Team, Co-Leader, 2001-2005
Selection Committee, Cropping Systems Specialist, Idaho Falls, 2001
Selection Committee, Entomologist, Aberdeen, 2000
Selection Committee, Plant Pathologist, Aberdeen, 2000

R&E Center:
Facilities Committee, Chair, 2009
Twilight Tour Committee, 2009
Center Administrative Committee, 2009

Professional and Scholarly Organizations:

Intermountain Native Plant Growers Association, 2009
Board of Directors
Eriogonum Society, 2009
American Society for Horticultural Science, 1982-present
Tex Frazier Lecture Committee, 2007-present
American Penstemon Society, 2007-present
Journal Editor, 2007-present
North American Rock Garden Society, 2006-present
Idaho Native Plant Society, Sah-Wah-Be Chapter, 2006-present
Potato Association of America, 1985-present
Outstanding Paper Award Committee (Chair), 2008-present
Local Arrangements Committee, 2006-2007
Cover Editor, 2006-present
Editorial Board, 2001-present
Senior Editor, 2001-present
Variety Handbook Committee
Past President and member of the Executive Committee, 2000-01
Chair of the Honorary Life Member Committee, 2000-01
Chair of the Officer Nomination Committee, 2000-01
President, 1999-2000
President-Elect, 1998-99
Vice President, 1997-98
Director, 1994-97
Journal Format Committee, 1996-98
Variety Handbook Committee, 1994-97
Graduate Student Awards Committee, 1988-91; Chair, 1989-91
Honorary Life Member Selection Committee, 1997-2000
Directed efforts to modernize and reformat the *American Potato Journal*, now entitled *American Journal for Potato Research*, 1996-98

Community Service:

Aberdeen Gem Trail Committee, 2007-present
Aberdeen City Tree Committee, Chair, 1999-2002
Assistant Track Coach, Aberdeen High School, 1998-present
Boy Scout District Commissioner, 2003-present
Boy Scout Unit Coordinator, 1991-97
Varsity Scout District Chairman, 1989-91
Cub Scout Leader, 1987-91, 1998-present
Rotary Club, 1988-present
Secretary, 1994-present
President, 1992-93, 2007-2009
President Elect, 1991-92
Board of Directors, 1989-present

Honors and Awards:

Technology Transfer Award, Federal Consortium for Technology Transfer, 2002
Outstanding Paper Award, Potato Association of America, 1998
President’s Certificate of Appreciation, Potato Association of America, 1997
Certificate of Appointment, Plant Variety Protection Board, 1995
State Team Award, Epsilon Sigma Phi, 1991