

**NRSP/IR BUDGET REQUESTS -- ATTACHMENT I  
ACCOMPLISHMENTS CY2002**

**NRSP-6: Introduction, Classification, Preservation, Evaluation and Distribution of tuber-bearing *Solanum* species germplasm.**

Introduction:

Important progress was made in building the collection. We incorporated unique germplasm from the US, Poland, Mexico, Bolivia and Russia.

Classification: Dr. Spooner continues to resolve problems in taxonomic classification that impede efficient documentation and use of the germplasm. Insights gained from these studies will allow accessions to be assigned stable species names based on empirical differences.

Preservation: The usual work for maintenance of top quality *Solanum* germplasm at NRSP-6 was continued. Germination tests were done on new seed and on others on a 5-year rotation. Virus tests were done on new seeds and the in vitro clonal stocks. Seed increases were done in the spring, fall and summer. RAPD markers were used to assess several aspects of the status and dynamics of genetic diversity in the genebank.

Evaluation was continued in house or with collaborators specializing in the particular trait: Combining frost tolerance with good tuber type, tuber calcium, tuber and foliar glycoalkaloids, late blight, antioxidants and hormone mutants.

Distribution: NRSP-6 distributed 3447 units of seed, 1122 tuber families and 919 in vitro stocks to clientele in 20 states of the United States and 14 other countries.

Intergenebank Collaboration: Research to determine the genetic consequences of tuber vs seed collection was completed. Equivalence of presumed duplicate populations held in different genebanks was the subject of continued work. A potato intergenebank (APIC) meeting was held in 2002 in Hamburg, Germany.

**NRSP/IR BUDGET REQUESTS -- ATTACHMENT II  
GOALS CY2003**

**NRSP-6: Introduction, Classification, Preservation, Evaluation and Distribution of tuber-bearing *Solanum* species germplasm.**

Introduction: We will continue 2002's success in identifying and importing stocks that will be used for the genetic improvement of the potato crop. We will strengthen our collaborative ties with other genebanks. Introduction is expected to be somewhat restricted due to delays in sharing by host countries and limited capacity of the US Quarantine lab.

Classification: Experiments to better understand species boundaries will continue.

Preservation: Efforts to identify less expensive, easier, and more reliable ways to grow and increase potato germplasm will continue. Samples of new germplasm will be transferred to NSSL and/or the University of Wisconsin for backup. Rigorous disease prevention and monitoring practices (mainly for viruses) will be continued. We will continue bacterial ring rot screening as a health monitoring protocol for the in vitro collection. We will continue research to measure the status and dynamics of genetic diversity in the genebank pursuant to preventing its loss during preservation.

Evaluation: We will continue evaluating potato germplasm for frost tolerance, glycoalkaloids, tuber calcium accumulation, hormone mutants, antioxidants, late blight, nematodes and other characteristics that impact the continued success of the potato crop. We also plan to pursue traits that impact consumers more directly to be more in touch with stake-holders. Evaluation is a high priority for the genebank, since it is the key to mining the value of the germplasm in which we have invested so much effort for preservation. We will continue work to find ways to manipulate tuberization for screening tuber traits.

Distribution: Potato is the world's most important vegetable crop, and the genebank at Sturgeon Bay is the world's most comprehensive and accessible collection. Germplasm and technical assistance for researchers and breeders will continue to be rapidly and impartially available here.

Intergenebank Collaboration: The cooperative intergenebank project will continue to use RAPDs to assess the dynamics of genetic diversity in model US species. We will complete work to compare reputed duplicates from the CIP and US collections. We will compare nematode resistance in the US and VIR collections.

NRSP-6 Appendix  
**JUSTIFICATION**  
 For 2% SALARY increase in FY 2004

The need is increasing: The size of the collection and associated labor, supplies and upkeep are rising rapidly. This combined with the flat budgets we have received in the past several years means we are “losing ground.” We ask that this problem at least be *partially* offset by a **2% increase for salaries in FY 2004** to redress FY2003 attrition.

**NRSP/IR BUDGET REQUESTS**  
 SUMMARY  
NRSP-6: Interregional Potato Introduction Project

| Description                   | Multistate Research Funding |     |                                    |     |                                  |     | Other Sources of Funding |     |                                  |     |
|-------------------------------|-----------------------------|-----|------------------------------------|-----|----------------------------------|-----|--------------------------|-----|----------------------------------|-----|
|                               | Authorized<br>FY 2002       |     | Authorized <sup>a</sup><br>FY 2003 |     | Proposed <sup>b</sup><br>FY 2004 |     | Authorized<br>FY 2003    |     | Proposed <sup>c</sup><br>FY 2004 |     |
|                               | Dollars                     | FTE | Dollars                            | FTE | Dollars                          | FTE | Dollars                  | FTE | Dollars                          | FTE |
| Salaries                      | 98,287                      | 3.3 | 100,253                            | 3.3 | 102,258                          | 3.3 | 147,145                  | 3.1 | 150,087                          | 3.1 |
| Fringe Benefits (Salary Only) | 30,685                      |     | 31,299                             |     | 31,925                           |     | 58,754                   |     | 59,929                           |     |
| Wages (+ wage fringe)         | 7,616                       |     | 7,768                              |     | 7,924                            |     | 0                        |     | 0                                |     |
| Travel                        | 1,331                       |     | 1,331                              |     | 1,331                            |     | 6,000                    |     | 6,120                            |     |
| Supplies                      | 16,233                      |     | 16,233                             |     | 16,233                           |     | 0                        |     | 0                                |     |
| Maintenance                   | 7,423                       |     | 4,691                              |     | 4,691                            |     | 0                        |     | 0                                |     |
| Equipment/Capital Imp.        | 0                           |     | 0                                  |     | 0                                |     | 0                        |     | 0                                |     |
| UW Contribution (est.)        | 0                           |     | 0                                  |     | 0                                |     | 66,700                   |     | 68,034                           |     |
| <b>TOTAL</b>                  | <b>161,575</b>              |     | <b>161,575<sup>d</sup></b>         |     | <b>164,362</b>                   |     | <b>278,599</b>           |     | <b>284,170</b>                   |     |

<sup>a</sup> 2.0% salary increases

<sup>b</sup> 2.0% salaries increase -- see Appendix: JUSTIFICATION

<sup>c</sup> estimated 2% increase

<sup>d</sup> unrealistic figures for travel & supplies required to balance authorized budget

**NRSP-6 BUDGET REQUEST**  
NRSP-6: Interregional Potato Introduction Project

DETAILED INFORMATION ON POSITIONS, SALARIES, AND FRINGE BENEFITS

| SALARIES                        | Multistate Research Funding        |            |                                    |            |                                   |            | Other Sources of Funding |            |                      |            |
|---------------------------------|------------------------------------|------------|------------------------------------|------------|-----------------------------------|------------|--------------------------|------------|----------------------|------------|
|                                 | Authorized <sup>a</sup><br>FY 2002 |            | Authorized <sup>b</sup><br>FY 2003 |            | Requested<br>FY 2004 <sup>c</sup> |            | Authorized<br>FY 2003    |            | Requested<br>FY 2004 |            |
|                                 | Dollars                            | FTE        | Dollars                            | FTE        | Dollars                           | FTE        | Dollars                  | FTE        | Dollars              | FTE        |
| Admin. Project Assistant        | 26167                              | 0.6        | 26,690                             | 0.6        | 27,224                            | 0.6        | 17,794                   | 0.4        | 18,149               | 0.4        |
| Technician (Specialist)         | 32542                              | 1.0        | 33,193                             | 1.0        | 33,857                            | 1.0        | 0                        |            | 0                    |            |
| Technician                      | 17181                              | 1.0        | 17,524                             | 1.0        | 17,875                            | 1.0        | 0                        |            | 0                    |            |
| Gardener                        | 5858                               | 0.2        | 5,975                              | 0.2        | 6,094                             | 0.2        | 23,899                   | 0.8        | 24,377               | 0.8        |
| ½ Research Assistant            | 16540                              | 0.5        | 16,871                             | 0.5        | 17,208                            | 0.5        | 0                        |            | 0                    |            |
| Secretary / Clerical            | 0                                  |            | 0                                  |            | 0                                 |            | 16,102                   | 0.6        | 16,424               | 0.6        |
| ARS Research Leader             | 0                                  |            | 0                                  |            | 0                                 |            | 7,350                    | 0.1        | 7,497                | 0.1        |
| ARS Geneticist / Proj. Leader   | 0                                  |            | 0                                  |            | 0                                 |            | 52,000                   | 0.8        | 53,040               | 0.8        |
| ARS Research Botanist           | 0                                  |            | 0                                  |            | 0                                 |            | 30,000                   | 0.4        | 30,600               | 0.4        |
| Total Salaries                  | 98,287                             |            | 100,253                            |            | 102,258                           |            | 147,145                  |            | 150,087              |            |
| Fringe Benefits (Salaries only) | 30,685                             |            | 31,299                             |            | 31,925                            |            | 58,754                   |            | 59,929               |            |
| <b>TOTAL</b>                    | <b>128,973</b>                     | <b>3.3</b> | <b>131,552</b>                     | <b>3.3</b> | <b>134,183</b>                    | <b>3.3</b> | <b>205,899</b>           | <b>3.1</b> | <b>210,016</b>       | <b>3.1</b> |

<sup>a</sup> Actual FY 2002 % UW Salary increase = 4% (not covered by zero budget increase)

<sup>b</sup> FY 2003 expected 2% Salary increase approved by UW (not covered by zero budget increase).

<sup>c</sup> Request 2% Salary increase to redress FY2003 attrition. Actual FY 2004 increase by institution = 0%