

NRSP/IR BUDGET REQUESTS -- ATTACHMENT I
ACCOMPLISHMENTS CY2003

**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, Sweden, Poland, Mexico and the UK.

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. Research was done to determine the most effective germination, culture and seed increase methods. DNA 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 11,980 units of germplasm to 159 cooperators across the USA and internationally. This was an unusually high volume of demand for our germplasm.

Intergenebank Collaboration: Research continued to determine the genetic consequences of tuber vs seed collection. Research cooperation with CIP and VIR was planned. A meeting of Latin American curators at the ALAP meeting was organized.

NRSP/IR BUDGET REQUESTS -- ATTACHMENT II
GOALS CY2004

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

Introduction: We will continue 2003'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 DNA markers to assess the dynamics of genetic diversity in model species. We will meet with Latin American genebank curators and continue joint research with sister genbanks in Peru and Russia.

NRSP-6 Appendix

JUSTIFICATION

For 3% SALARY increase in FY 2005

The need is increasing: The size of the collection and associated salaries, supplies and upkeep are rising. 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 **3% increase for salaries in FY 2005** to redress recent attrition.

NRSP/IR BUDGET REQUESTS

SUMMARY

NRSP-6: Interregional Potato Introduction Project

Description	Multistate Research Funding						Other Sources of Funding			
	Authorized FY 2003 ^a		Authorized FY 2004		Proposed ^b FY 2005		Authorized FY 2004		Proposed ^c FY 2005	
	Dollars	FTE	Dollars	FTE	Dollars	FTE	Dollars	FTE	Dollars	FTE
Salaries	104,697	3.3	108,480	3.3	111,735	3.3	150,088	3.1	154,590	3.1
Fringe Benefits (Salary Only)	32,324		33,294		34,293		59,929		61,727	
Wages (+ wage fringe) ^d	0		0		0		20,000		20,600	
Travel	1,253		1,253		1,253		8,000		8,240	
Supplies	16,233		16,233		16,233		0		0	
Maintenance ^d	7,068		2,315		2,315		0		0	
Equipment/Capital Imp.	0		0		0		0		0	
UW Contribution (est.)	0		0		0		68,034		70,075	
TOTAL	161,575		161,575		165,829		306,051		315,232	

^a Actual

^b 3.0% salaries increase -- see Appendix: JUSTIFICATION

^c Estimated 3% increase.

^d reduce or eliminate part time labor and maintenance to offset salary increases at constant budget. "Other Sources..." now accounts realistic estimate of compensating contribution of ad hoc genebank labor costs from other funds.

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 ^a FY 2003		Authorized ^b FY 2004		Requested FY 2005 ^c		Authorized FY 2004		Requested FY 2005	
	Dollars	FTE	Dollars	FTE	Dollars	FTE	Dollars	FTE	Dollars	FTE
Admin. Project Assistant	30,186	0.6	29,415	0.6	30,298	0.6	18,149	0.4	18,694	0.4
Technician (Specialist)	33,613	1.0	37,572	1.0	38,699	1.0	0		0	
Technician	18,139	1.0	18,231	1.0	18,778	1.0	0		0	
Gardener	6,219	0.2	6,226	0.2	6,413	0.2	24,377	0.8	25,108	0.8
½ Research Assistant	16,540	0.5	17,036	0.5	17,547	0.5	0		0	
Secretary / Clerical	0		0		0		16,424	0.6	16,917	0.6
ARS Research Leader	0		0		0		7,497	0.1	7,722	0.1
ARS Geneticist / Proj. Leader	0		0		0		53,040	0.8	54,631	0.8
ARS Research Botanist	0		0		0		30,600	0.4	31,518	0.4
Total Salaries	104,697		108,480		111,735		150,087		154,590	
Fringe Benefits (Salaries only)	32,324		33,294		34,293		59,929		61,727	
TOTAL	137,021	3.3	141,774	3.3	146,028	3.3	210,016	3.1	216,317	3.1

^a Actual

^b FY 2004 expected salary adjustments average 3.4%

^c Request 3% Salary increase

