

Example of ARS Partnerships in Wheat Breeding



Genetic Resources

ARS Small Grains Repository
(partnering with University of Idaho)



Genomics, Genotyping, Databases

(partnering with USDA-CSREES and NSF Award Projects)



Disease and Insect Protection

U.S. Wheat & Barley Scab Initiative
(partnering with universities)

Global Rust Initiative
(partnering with CIMMYT, ICARDA, and universities world-wide)



Quality Labs

(partnering with public/private breeders/industry)



ARS Mission

The Agricultural Research Service conducts research to develop and transfer solutions to agricultural problems of high national priority and provides information access and dissemination to:

- ensure high-quality, safe food and other agricultural products
- assess the nutritional needs of Americans
- sustain a competitive agricultural economy
- enhance the natural resource base and the environment, and
- provide economic opportunities for rural citizens, communities, and society as a whole

NP301 Co-Leaders

Peter Bretting, National Program Leader,
Plant germplasm and genomes
Peter.Bretting@ars.usda.gov, phone: 301-504-5541

Eric Rosenquist, National Program Leader,
Tropical crops
Eric.Rosenquist@ars.usda.gov, phone: 301-504-4789

Kay Simmons, National Program Leader,
Plant genetics and grain crops
Kay.Simmons@ars.usda.gov, phone: 301-504-5560

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February 2007

United States Department of
Agriculture

**Agricultural Research
Service**

Plant Breeding Research in USDA-ARS



**USDA-ARS
National Program Staff
Crop Production and Protection
5601 Sunnyside Avenue
Beltsville, MD 20705
301.504.4650**

Visit ARS at www.ars.usda.gov

USDA-ARS Plant Breeding Research is part of the Plant Genetic Resources, Genomics, and Genetics Improvement National Program (NP301)



NP301 Vision

Providing genetic resources, genomic information, and genetic tools to enhance crop production, quality, and safety, in partnership with public and private collaborators

NP301 Research Components

1. Plant and Microbial Genetic Resource Management

The National Plant Germplasm System conserves and evaluates more than 476,000 plant germplasm samples, distributing > 120,000 samples annually.



2. Crop Informatics, Genomics and Genetic Analyses

Crop genome database stewardship and bioinformatics tool development, structural comparison and analysis of crop genomes, genetic analyses and mapping of important traits



3. Genetic Improvement of Crops

Genetic theory and methods of crop improvement, capitalizing on untapped genetic diversity, germplasm enhancement/release of improved genetic resources and varieties



For more information

Visit on-line at www.ars.usda.gov/research/programs
Click link to NP301

Crop	Number of Scientists (SYs) in Plant Breeding Research (FY 2006)	
	Plant Breeding and Germplasm Enhancement	Applied Genetics for Breeding
Fruits	20.1	10.2
Vegetables	17.6	12.4
Sugar Crops	11.4	3.6
Corn/Sorghum	17.5	12.7
Rice	4.3	6.4
Wheat/Barley/Oats	21.6	24.1
Forages/Grasses	19.4	2.8
Cotton	8.5	2.1
Oilseeds	14.4	21.1
Ornamentals	8	2
Other	2.3	7
TOTAL	145.1	104.4