

## I. Breeding Efforts by Crop

Crop Group	Person Years	Disclosures past 5 years
Alfalfa	.75 (0 in 2007)	2
Maize	1.58	16
Small Grains	.85	2*
Forage Grass	.1 (0 in 2007)	1**
Popcorn	.5 (0 in 2007)	21
Soybean	1.57	192
Total	4.8 in 2007	234

\*Oat \*\*Orchard Grass

## II. Plant Breeding Efforts by Activity

Activity	Person Years	%
Plant Breeding Research	2.14	42.7
Germplasm Enhancement	0.58	11.7
Cultivar Development	0.83	16.6
Biotechnology Research and Development	0.45	9
Plant Breeding Education	1.00	20
Totals	5	100

## III. Plant Breeding Graduate Students

	Total	U.S.	Intl.
Current Graduate Students	25	13	12
Current Undergraduate Students in PB Option—16 Mentoring Program led by plant breeding faculty offered to these students			
Graduates in 2006	8	5	3
Graduates in 2005	8	6	2
Graduates in 2004	7	3	4
Graduates in 2003	14	9	5
Graduates in 2002	9	8	1
Graduates in 2001	13	5	8
Graduates in 2000	10	7	3

## IV. Job Placement of Recent Graduates

Year	Graduates	# of Graduates to Job Type
2006	8	5-Industry, 1-Public Univ.
2005	8	1-Industry, 1-Public Univ., 1-Farmer 1-ARS, 1-Nat. Program, 2-Student
2004	7	2-Industry, 2-Public Univ., 3-Student
2003	14	7-Industry, 1-ARS, 3-Public Univ. 1-Student
2002	9	5-Industry, 1-ARS, 1-Public Univ. 1-NGO, 1-Student

Demand for plant breeders is high. Industry representatives report shortages of applicants and jobs unfilled. Employers and potential students increasingly interested in "professional degree," which focuses more on basic breeding and research techniques.

## VI. Institutional Philosophy

Establishment of the R.F. Baker Center for Plant Breeding, through endowment funding, shows the strong commitment of the university toward plant breeding efforts. Support for plant breeding has diminished over time as evidenced by the decrease in the numbers of plant breeders and the lack of state and federal funding support.

## External Grants and Contracts-Past 5 Years

Crop Group	Funding Totals
Forage	\$472,726
Maize	\$5,7977,734
Small Grains	\$1,362,189
Soy	\$3,156,639

## V. Iowa State University Plant Breeding Courses

**Introduction to Plant Breeding.** Breeding methods used in the genetic improvement of self-pollinated, cross-pollinated and asexually reproducing agronomic crops.

**Principles of Cultivar Development.** Theoretical and practical analysis of alternative breeding methods to improve crop plants.

**Field Methods in Plant Breeding.** Field experience in planning and conducting plant breeding research for cross-pollinated and self-pollinated crops.

**Advanced Plant Breeding.** Estimation and interpretation of genetic effects and variances of plant populations, prediction of genetic gain, inbreeding and heterosis.

**Genetic Strategies in Plant Breeding.** Evaluation of genetic, molecular, and cellular approaches to crop improvement; gene transfer methods.

**Plant Breeding Seminar.** Reports and discussion of recent literature and research in plant breeding.

## The Raymond F. Baker Center for Plant Breeding

- advances the science of plant breeding through hypothesis driven research,
- develops enhanced germplasm and superior cultivars of improved productivity, nutritional value, and adaptability,
- and educates the next generation of public and private plant breeders

