

Mission



Institute of Plant Breeding,
Genetics & Genomics

To train graduate students, conduct research, and develop improved crop cultivars through the integration of classical and modern genetic technologies.

Graduate Programs



Institute of Plant Breeding,
Genetics & Genomics

Masters of Plant Breeding, Genetics & Genomics

Currently 12 M.S. students

Total 30 h (min 21 h coursework, 6 h research, 3 h writing)

Required Courses:

Research Seminar (PBGG/CRSS/HORT 8861)

Plant Breeding (PBGG/CRSS/HORT 6140)

Plant Breeding Practicum (PBGG/CRSS/HORT 6000)

Statistics



Graduate Programs



Institute of Plant Breeding,
Genetics & Genomics

Doctorate of Plant Breeding, Genetics & Genomics

Currently 18 Ph.D. students

Total 30 h (36 h for straight-through PhD) (at least 16 h 8000-9000 level excluding research/writing)

Required Courses:

Research and Communication Seminars (PBGG/CRSS/HORT 8860 & 8861)

Advanced Plant Breeding (PBGG/CRSS/HORT 8140)

Plant Breeding Practicum (PBGG/CRSS/HORT 6000)

Plant Genetics; Experimental Design



Membership



Institute of Plant Breeding,
Genetics & Genomics

- UGA Faculty 26
from the Departments of Crop and Soil Sciences or
Horticulture; 22 are Graduate Faculty
- Adjunct Faculty 2
- Emeritus Faculty 2
- Affiliate Faculty 6

UGA Legacy of Plant Breeding



Institute of Plant Breeding,
Genetics & Genomics



2009 – UGA Inventor of the Year



Michael Dirr
Professor of Horticulture (retired)

Mike Dirr introduced more than 100 new plants to the horticultural world during his nearly 30-year career as a CAES horticulture professor. His research on plant selection and breeding has resulted in the introduction of several commercially successful varieties, including the popular hydrangeas "Endless Summer," "Blushing Bride" and "Twist-n-Shout." Producing a new plant can



Creative Commons; Captain-tucker

2003 – UGA Inventor of the Year



Wayne W. Hanna
Professor of Crop and Soil Sciences

Hanna developed and patented winterhardy, pest-resistant Bermudagrasses able to withstand heavy traffic. Many of these grasses are now used on golf courses, football fields and soccer pitches around the world.



2011 – UGA Inventor of the Year



Roger Boerma
Distinguished Research Professor of Crop and Soil Sciences and Director of the UGA Center for Soybean Improvement and UGA Center for Applied Genetic Technologies

Boerma has spent much of his career developing several superior transgenic and conventional soybean cultivars now widely grown across the country. His use of DNA marker-assisted selection shortened the breeding cycle for the development of new soybean cultivars by more than three years. The new cultivars have superior seed yield and resistance to multiple nematode and fungal disease species. The high-yielding Woodruff cultivar includes two new yield genes, which were discovered in a Japanese soybean accession and transferred into Woodruff using the DNA marker technology. The widespread use of Boerma's improved cultivars has lessened the need for pesticides and boosted seed yield, which has reduced production costs, provided greater profit per acre and created more sustainable production practices.



2015 – UGA Inventor of the Year
Jerry Johnson
Professor of Crop and Soil Sciences

UGA Plant Varieties

Agronomic Crops

- Peanuts
- Soybeans
- Wheat
- Forage Crops
- Canola
- Cotton



Horticultural Food Crops

- Blueberries
- Peaches
- Pecans
- Muscadine grapes
- Pumpkin



Turfgrass

- Bermudagrass
- Centipede Grass
- Seashore Paspalum



Ornamental Plants

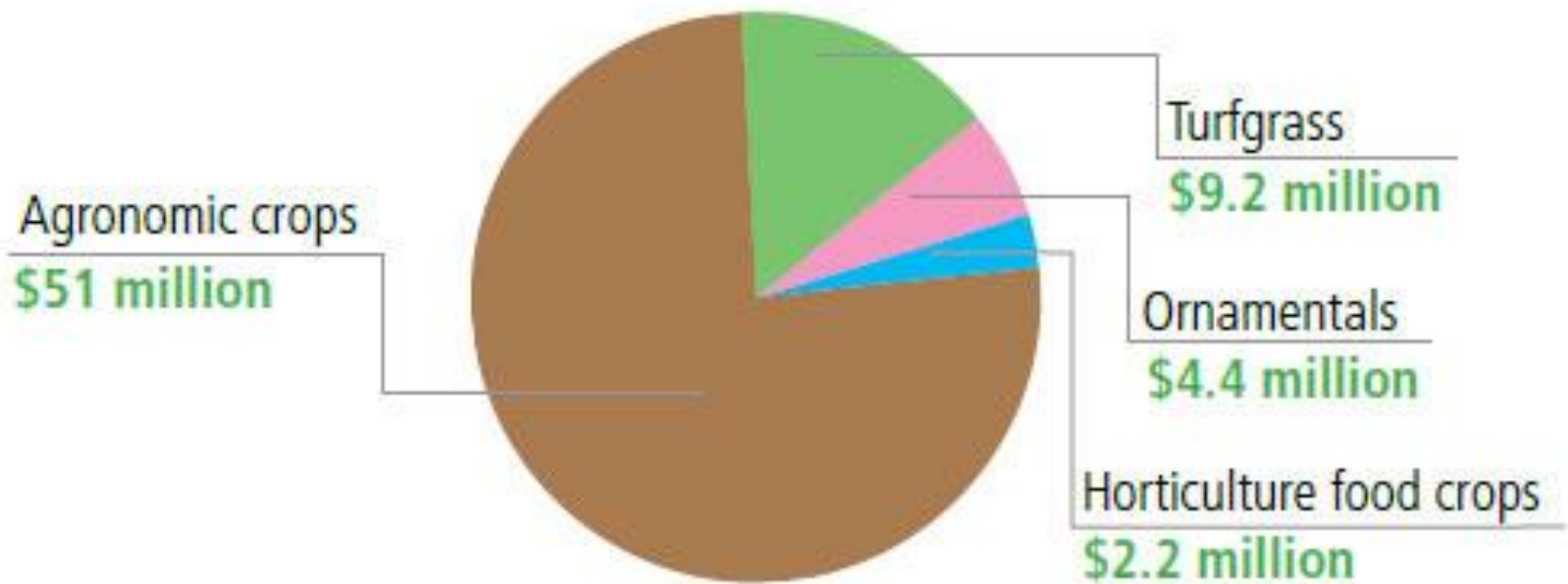
- Hydrangeas
- Crape Myrtles
- Ornamental Grasses
- Shrubs & small trees
- Herbaceous Annuals & Perennials



Plant Cultivar Revenue (1990-)

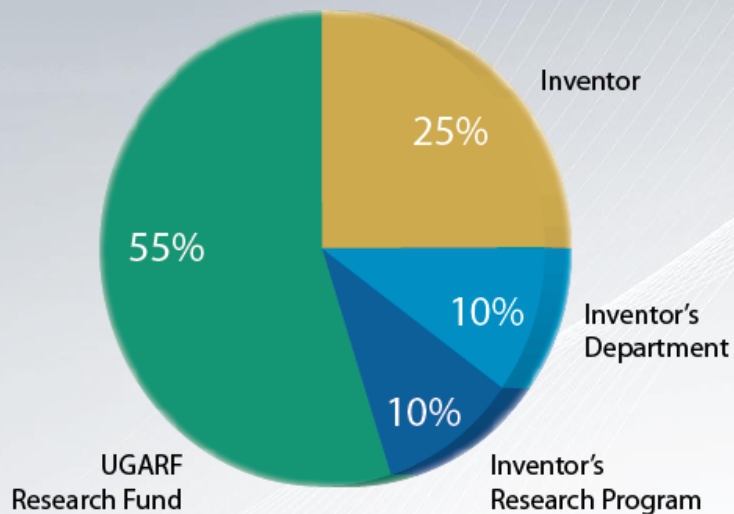


Institute of Plant Breeding,
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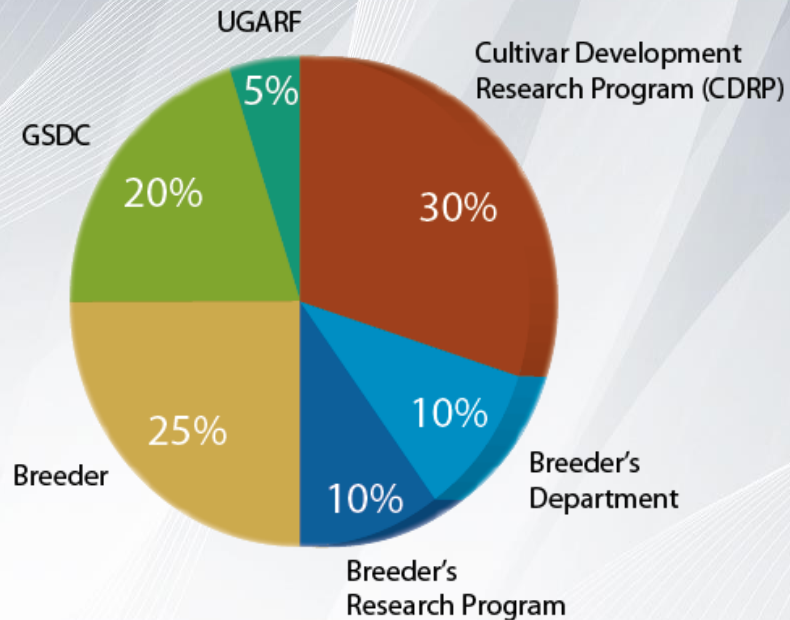


Licensing Revenue Invested in Research

Non-Plant Cases

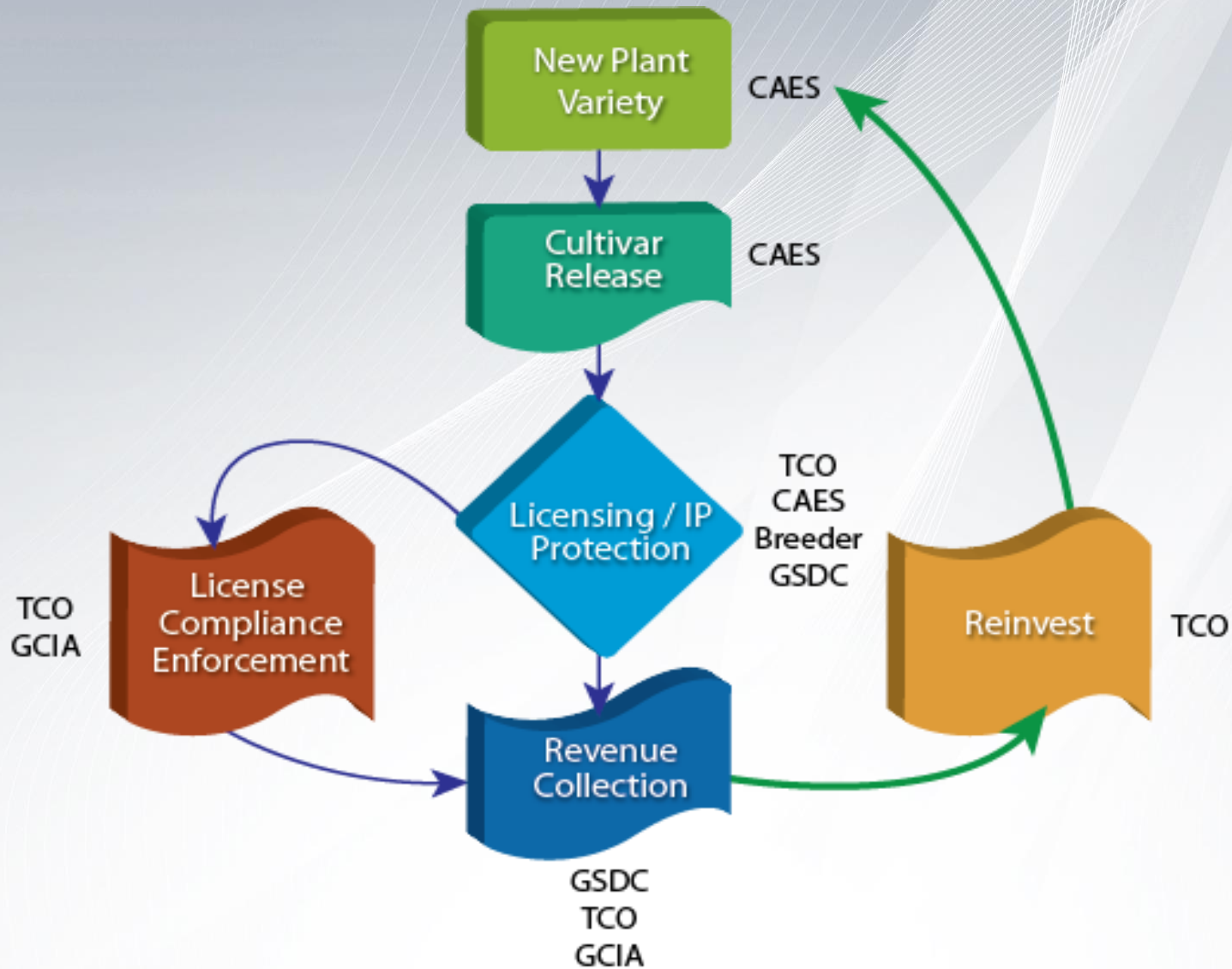


Plant Varieties



- Inventor/breeder shares in success
- Majority of revenue is re-invested in research

Plant Licensing Process

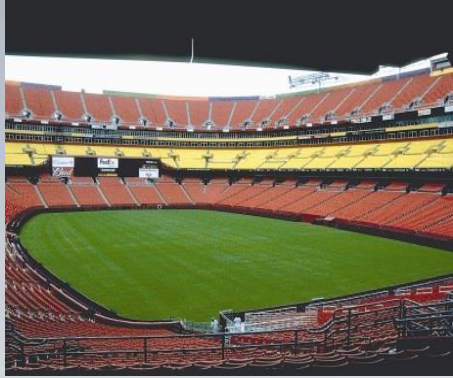


Plant Licensing and Breeding Reinvestment at UGA

- New plant varieties are commercialized to maximize research investment.
- Royalty revenue is reinvested in research for the development of future plant varieties.
- UGA Plant Breeding Programs have a steady source of funding with the Cultivar Development Research Program (CDRP).
- Over \$14M in grants have been awarded to UGA Plant Breeders through the CDRP in last 15 years.
- CDRP gives UGA a tremendous advantage over other breeding programs.



UGA Research: *Good for Georgia. Good for the World.*



Plants from UGA

