



PLANT BREEDING IN MISSISSIPPI

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PART I. BREEDING EFFORTS BY CROP

Crop Group	PYs	Releases in the past 5 years	
		Germplasm	Cultivars
Cotton Breeding	3.70		
Johnie Jenkins(USDA)		6	
Jack McCarty(USDA)		31	
Ted Wallace(MSU)			2
Peggy Thaxton(MSU)			
Turf Breeding	1.00		
Wayne Philley(MSU)			2
Rice Breeding	1.00		
Dewight Kanter(MSU)			5
Soybean Breeding	1.00		
USDA-ARS-Stoneville		6	2
Corn Breeding	3.00		
Paul Williams(USDA)		2	
Tom Brooks(USDA)			
Brian Henry(USDA)			
Kenaf	0.40		
Brian Baldwin		3	1
Blueberries/Muscadine Grape			
Steve Stringer	1.00		5
Total	11.1	48	12

Part II. Breeding efforts by activity.

Activity	PYs	%
(a) Plant Breeding Research	1.35	12.2
(b) Germplasm Enhancement	5.58	50.2
(c) Cultivar Development	3.03	27.3
(d) Biotechnology Research and Development	0.90	8.1
(e) Plant Breeding Education	0.25	2.3
Total	11.1	100

IV. Job placement of recent graduates: (plant breeding)

Pioneer Hi-Bred	Jimmy Sanders Seed Company
Emergent Genetics	Terral Seed company
RiceTec	Bayer Crop Sciences
DelMonte	USDA-ARS
Sewanee University	Tennessee Department of Agriculture.
Delta and Pine Land	Dow Agri Sciences

Part III. Recent graduates and current graduate student enrollment

Activity	Recent	Current
Cotton Breeding		
Johnie Jenkins (USDA)	0	6
Jack McCarty (USDA)	0	7
Ted Wallace (MSU)	1	
Peggy Thaxton (MSU)	1	
Turf Breeding		
Wayne Philley (MSU)		
Rice Breeding		
Dewight Kanter (MSU)	1	
Soybean Breeding		
ARS-USDA		
Corn Breeding		
Paul Williams (USDA)	2	1
Tom Brooks (USDA)		
Brian Henry (USDA)		
Kenaf		
Brian Baldwin	2	3
Blueberries/Muscadine Grape		
Stephen Stringer		
Total	7	17

V. Plant breeding course offerings at your institution:

UNDERGRADUATE (split level = grad& undergrads)

Plant Propagation: Two hours lecture. Two hours laboratory. Basic principles in the propagation of horticultural plants.

Plant Tissue Culture (SPLIT LEVEL): Three hours lecture. Three hours laboratory. A comprehensive study of plant cell, tissue and organ culture with emphasis on practical applications of tissue culture in various areas of plant science.

Plant Breeding(SPLIT LEVEL): Two hours lecture. Two hours laboratory. Application of genetic principles to the improvement of economic crop plants; history, methods and procedures of plant breeding.

GRADUATE LEVEL

Advanced Plant Breeding: Three hours lecture. Fall semester, even-numbered years. An intensive review of methods of plant improvement and the application of these methods to modern plant breeding.

Molecular Biology: Three hours lecture. A study of basic molecular process such as synthesis of DNA, RNA, and protein in both prokaryotic and eukaryotic cells. Offered fall semester.

VI. Institutional philosophy, strengths, weaknesses, future plans, other comments.

Comments by researchers:

Biometrical genetics no longer taught (due to a retirement)

Molecular genetics is on the books - but has not been taught in recent history

Plant breeding course offering is very marginal

Plant breeding majors not recommended for successive degrees (ie. Course offering does not allow for both M.S. and Ph.D. in breeding)

The entire agency needs to address the issue of greenhouse upgrading. Also, there is no good mechanism to buy big ticket field equipment to replace old equipment.

On an educational level, you have to wonder where plant breeders will be trained in the future. Many Universities have no commitment on the institutional level to plant breeding, or any other applied agricultural area of study. There may be no plant breeding courses left in future for training plant breeders.