





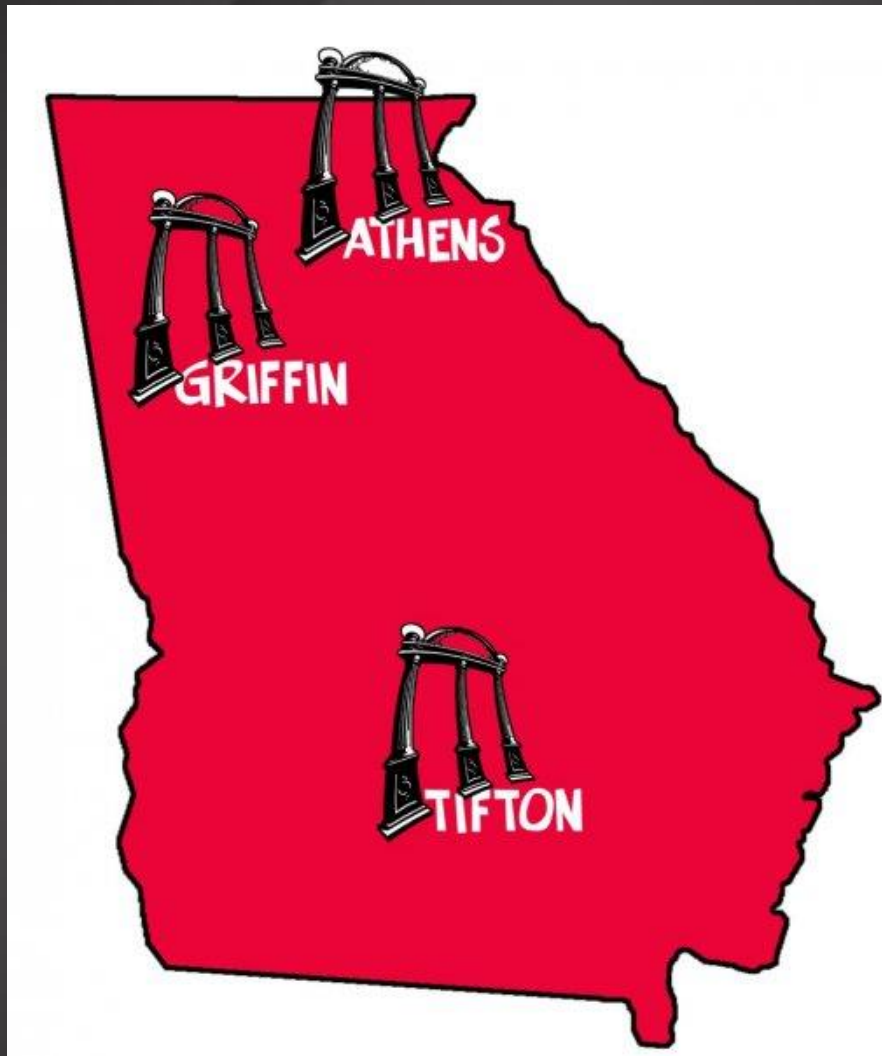
The University of Georgia

TIFTON CAMPUS

Collaboration Among UGA CAES & USDA ARS Scientists

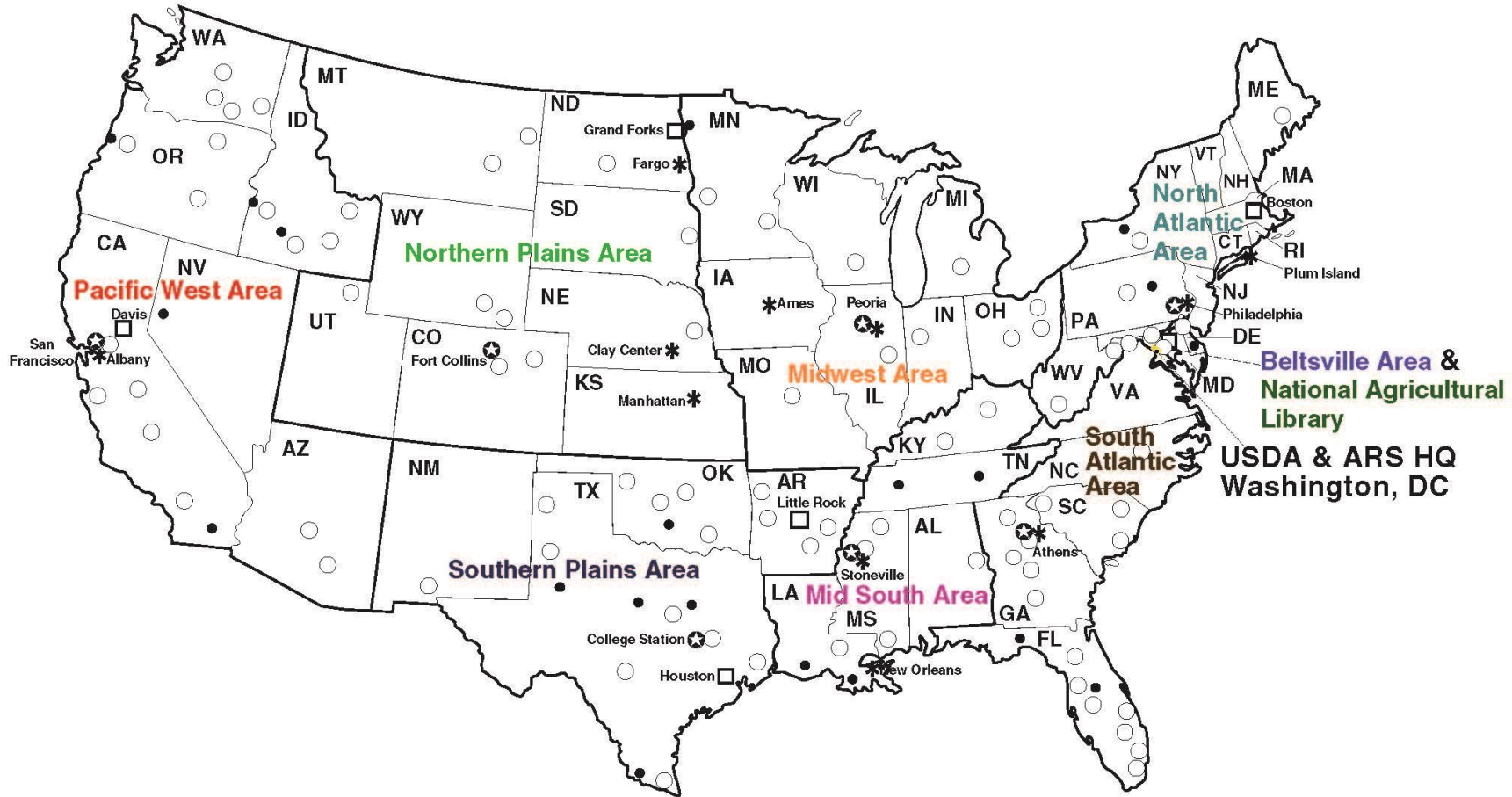


UGA College of Agricultural and Environmental Sciences - **Campuses**

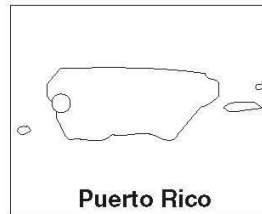
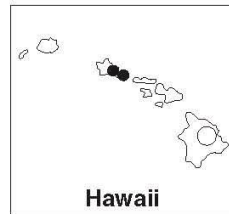
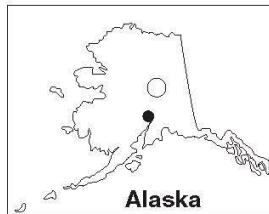


Agricultural Research Service Areas and Locations

USDA's Agricultural Research Service has over 2,000 scientists working in 100 locations.
 Color all the states and territories. Can you name them? Find your state. Do our scientists work in you state?



- ★ Area Offices Headquarters
- * Research Centers
- Human Nutrition Centers
- Research Locations
- Research Worksites



UGA CAES Departments at the UGA Tifton Campus

- Agricultural & Applied Economics
- Agricultural Leadership, Education, & Communications
- Animal & Dairy Science
- Crop & Soil Science
- Entomology
- Horticulture
- Plant Pathology
- Poultry Science





United States Department Of Agriculture
Agricultural Research Service



***Crop Genetics &
Breeding***

***Southeast
Watershed***



***Crop Protection &
Management***





University of Georgia

TIFTON CAMPUS – Personnel

(as of Sept. 2014)

	UGA	USDA-ARS
• Employees	<u>402</u>	<u>85</u>
• Scientists	62	20
• Support	100	65
• Technicians	78	
• Student workers	117	
• Utility, grad, post doc	45	



“In Tifton, we operate as a fairly seamless team of researchers. ARS scientists collaborate daily with UGA scientists. The UGA Assistant Dean allows ARS researchers to sign up for plot lands using the same process he requires of UGA scientists.....”

Location Coordinator for USDA ARS, Tifton, GA



Shared Activities

- ARS is co-located with UGA CAES
 - USG Board of Regents owns property
 - ARS has some buildings, most are UGA
 - Ground leases granted for ARS
- ARS scientists have full access to CAES farms
 - Same criteria as CAES scientists



Shared Activities

- Adjunct appointments for most USDA ARS scientists
- Advising graduate students
- Co-PI of grants
- Use of research field labs
- IT support for campus
- Included in all campus wide events



Collaborators

UGA CAES

- Molecular genetics - peanuts, cotton
- Conventional breeding - turf
- Ag engineering – precision ag, water quality
- Dairy Science – forage, water quality
- Plant Pathology – biological control of nematodes



Collaborators

USDA ARS

- Conventional breeding – peanuts, corn
- Molecular genetics - turf
- Nematology – peanuts, cotton, turf
- SE Watershed
 - Research ecology
 - Hydrology engineering
- Soil sciences



Results of Collaborations

- Forage breeding—pest resistance, reduced nutrient & water use
- Water quality
 - Riparian buffers, bacterial contamination
 - Dairy manure nutrient recycling via crop application
 - Effects of conservation practices on water quality
- Biological controls – bacterial, entomological
- Corn genetics – forage, nutrient quality



Water Quality and Quantity

Measuring, modeling
and limiting the
impacts of agricultural
production on water
resources



Results of Collaborations

- Marker assisted selection in peanuts
 - TSWV & nematode resistance, high oleic acid
- Molecular markers in:
 - Peanut disease resistance and seed quality
 - Pearl millet, root knot nematode resistance
 - Centipede turf, sting nematode resistance
 - Turf herbicide resistance
 - Tetraploidy in turf grasses



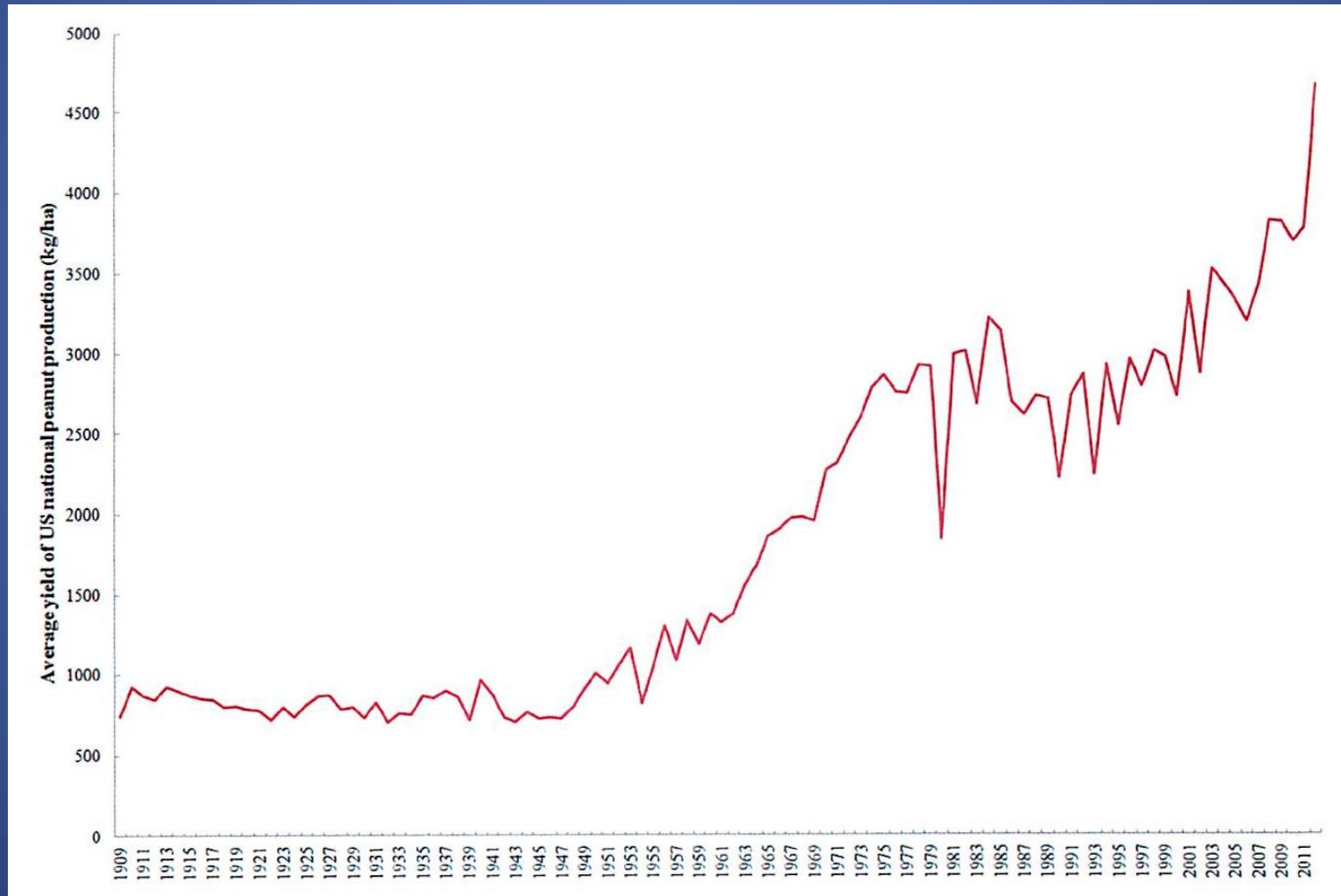


Root knot nematode
(*Meloidogyne arenaria*)



Tifguard

Yield per acre for US peanut for the past 100 years



Shared Results

- Co-authorship of publications
- Joint grant funding, co-PI's
- Joint release of new cultivars
 - Possible because of cooperation between ARS, GA Seed Development, GA Crop Improvement, and UGA Research Fndn.
 - Cultivar quality, inspections, licensing, and marketing



Collaborations work because:

- Scientists have complementary interests and skills
 - Because they want to make them work
- And can be inhibited by excessive or restrictive guidelines or “unnecessary” paperwork



Things that Work

- Research support agreements (RSA)
- Specific cooperative agreements (SCA)
 - Both should be facilitated
- Licensing and release of cultivars
- Synergy, critical mass



Challenges

- Restrictions on USDA ARS hiring of student workers
 - Currently handled via RSAs
- Passengers in federal vehicles
 - Weeks to get approval for CAES scientist to ride to USDA conference as an invited speaker
 - CAES scientist required to get quarterly approval
- Need to jointly fund graduate students and post-docs



“The location of USDA ARS scientists on the UGA Tifton Campus has helped foster collaborations. The *ARS scientists that are located in ARS buildings are a little isolated from the rest of the campus. I miss the interactions I had with UGA scientists when I was housed in Plant Sciences.* I find that being an adjunct in the Plant Pathology Department and going to the campus seminars helps me stay connected to other researchers on campus.”

USDA ARS research scientist, Tifton, GA



Keeping It Simple

- Long-term MOUs
 - To share equipment and services
 - For vehicular travel
- Unfunded cooperative agreements
 - Providing necessary liability protection without repetitive and time consuming submissions
- Joint funding of graduate students



Keeping It Simple

“It’s great here, but sometimes the institutions
get in the way.”

Scientist at UGA Tifton



Team Work





THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL &
ENVIRONMENTAL SCIENCES

