



# Welcome

## Kent Wolfe Director, UGA Center for Agribusiness and Economic Development



# Local Welcome

## Paula Burke

Carroll County Extension Coordinator and Agriculture and Natural Resources Agent, UGA Cooperative Extension



# Summary of 2017 Georgia Agricultural & Agribusiness Outlook

## Kent Wolfe Director, UGA Center for Agribusiness and Economic Development



# Economic Outlook

- US and Georgia Economies
- World Economy
- Trade Environment
- Renegotiating existing and pending trade deals



### Ag Forecast 2017 Inputs Outlook

 Seed prices: minor changes, estimate 1% increase

2017 Georgia

- All fertilizers down from year ago, likely hit bottom in 2016 (budgets: N = \$0.42, P = \$0.39, K = \$0.28)
- Diesel fuel down from year ago, hit bottom in 2016 and expected to increase through 2017
- Chemicals mixed (some up, some down)
- Machinery, up 1.5% from last year
- Labor rates are about same as last year













Planted Acres of Select Row Crops in Georgia and Change from 2015







Source: USDA/FAS/PSD database, marketing year dat

# Corn





## GA & US Corn Crops, 2014-2016

	Planted Acres		Harvested Acres			Yield (bu/acre)			
	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>GA</b> (1,000)	350	330	410	310	285	340	170.0	171.0	165.0
<b>US</b> (million)	90.6	88.0	94.0	83.1	80.7	86.7	171.0	168.4	174.6

- Planted acres up in US and GA
- Record US yield in 2016 but GA yield down
- Record US production at 15.148 billion





## U.S. Corn Supply and Demand







## **U.S. Corn Utilization**





## **Corn Price vs Ending Stocks**





#### **Corn Outlook Summary**

US corn acres to decrease in 2017 due to lower corn prices relative to soybeans

Ethanol levels increasing due to Renewable Fuel Standard increases

Whether strong exports continue is going to be a big question

GA price likely to be in the range of \$4.07 and \$4.22



# Peanuts





## GA & US Peanut Crops, 2014-2016

	Planted Acres		Harvested Acres			Yield (lbs)			
	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>GA</b> (1,000)	600	785	720	589	777	709	4,135	4,330	3,940
<b>US</b> (million)	1.35	1.63	1.67	1.32	1.56	1.55	3,923	3,845	3,675

- Planted acres up in US and down slightly in GA
- Yields on a downward trend for past 3 years

US production at 5.7 billion



## **U.S. Peanut Supply and Demand**







## **U.S. Peanut Utilization**







## **Peanut Price – Monthly Average**



Note: Runners, Virginia, and All prices are converted from values of weekly prices and marketings;



#### **Peanut Outlook Summary**

Low prices on other commodities combined with PLC payments have kept peanut acres high.

Peanut acres have been avoiding rotation which will raise issues with disease, yield, and cost.

Contracts currently around \$475 per ton. Expect another year of large plantings.

Will China continue to buy exports? Need to consider price and trade relations.





# Soybeans

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## GA & US Soybean Crops,

	Pla	nted Ac	res 2	0 11 24 ve 22 61 7 6 es			Yield (bu/acre)		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>GA</b> (1,000)	300	325	260	290	310	240	40.0	43.0	30.0
<b>US</b> (million)	83.3	82.7	83.4	82.6	81.8	82.7	47.5	48.0	52.5

- Planted acres up in US but down in GA
- Record US yield in 2016 but GA yield down
- Record US production at 4.3 billion bushels



## U.S. Sovbean Supply and



2017 Georgia Ag Forecast





## **U.S. Soybean Utilization**





## **Soybean Price vs Ending Stocks**





#### **Soybean Outlook Summary**

US soybean acres are projected to increase in 2017 due to the higher soybean prices relative to corn.

Whether strong exports continue is going to be a big question and will depend on the South American crop and the new presidential administration.

GA price likely to be in the range of \$9.40 and \$9.62



## Wheat





## GA & US Wheat Crops, 2014-2016

	Planted Acres		Harvested Acres			Yield (bu/acre)			
	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>GA</b> (1,000)	300	215	180	230	145	110	49.0	43.0	46.0
<b>US</b> (million)	56.8	55.0	50.2	46.4	47.3	43.9	43.7	43.6	52.6

- Planted acres down in US and GA
- Record US yield in 2016
- Winter Wheat US production at 1.67 billion



## **U.S. Wheat Supply and Demand**







## **U.S. Wheat Utilization**





## Wheat Price vs Ending Stocks





#### Wheat Outlook Summary

The price of wheat is going to continue to stay low with high ending stocks due to record yields in 2016, but we might have already seen the bottom.

A large over supply in the world will continue to keep prices down.

Projections are for wheat plantings to drop in 2017 helping the over supply situation but it is still very large.

GA price likely to be in the range of \$4.00 and \$4.27







Comparison of 2017	<b>Estimated Net Returns</b>	, Georgia, Irrigated
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	Corn	Cotton	Grn Sorgh	Peanuts	Soybeans
Expected Yield	200	1,200	100	4,700	60
Expected Average Price <sup>1</sup>	\$4.15	\$0.70	\$3.75	\$430	\$9.50
Crop Income	\$830	\$840	\$375	\$1,011	\$570
Variable Costs <sup>2</sup>	\$640	\$505	\$310	\$640	\$250
Net Return Per Acre Above VC	\$190	\$335	\$65	\$371	\$320
Net Return per Acre Above VC & \$189 Land	\$1	\$146	(\$124)	\$182	\$131
Kem					

1/ Expected average price. Cotton includes LDP and quality premium.

2/ Assumes Jan 2017 costs, Crop Comparison Tool, Department of Agricultural and Applied Economics, UGA



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	Corn	Cotton	Grn Sorgh	Peanuts	Soybeans
Expected Yield	85	750	65	3,400	30
Expected Average Price <sup>1</sup>	\$4.15	\$0.70	\$3.75	\$430	\$9.50
Crop Income	\$353	\$525	\$244	\$731	\$285
Variable Costs <sup>2</sup>	\$288	\$405	\$209	\$538	\$191
Net Return Per Acre Above VC	\$65	\$120	\$35	\$193	\$94
Net Return Per Acre Above VC + \$63 Land	\$2	\$57	(\$28)	\$130	\$31
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1/ Expected average price. Cotton includes LDP and quality premium.

2/ Assumes Jan 2017 costs, <u>Crop Comparison Tool</u>, Department of Agricultural and Applied Economics, University of Georgia








## Summary of 2017 **Georgia Agricultural & Agribusiness Outlook** Levi Russell, Assistant Professor, UGA CAES **Department of Agricultural Economics** and Applied Economics



# **Beef Cattle**



#### **JANUARY 1 TOTAL CATTLE INVENTORY**

C-N-01 08/04/16

U.S., Annual



Data Source: USDA-NASS Livestock Marketing Information Center

2017 Georgia Ag Forecast





Avg. 2010-14

••••2015

**CATTLE SLAUGHTER** Federally Inspected, Weekly

Data Source: USDA-AMS & USDA-NASS Livestock Marketing Information Center



2016

College of Agricultural & Environmental Sciences UNIVERSITY OF GEORGIA

C-S-08

12/30/16

#### **RETAIL BEEF PRICE**

Choice, Monthly



12/15/16

Data Source: Bureau of Labor Statistics & USDA-ERS

Livestock Marketing Information Center



#### **COW-CALF RETURNS AND CATTLE INVENTORY**



Data Source: USDA-AMS & USDA-NASS, Compiled and Analysis by LMIC



College of Agricultural & Environmental Sciences UNIVERSITY OF GEORGIA

Livestock Marketing Information Center

2017 Georgia Ag Forecast

#### MED. & LRG. #1 & 2 STEER CALF PRICES





Data Source: USDA-AMS, Compiled by LMIC **Livestock Marketing Information Center** 

**2017** Georgia **Ag Forecast** 



#### **Beef Outlook Summary**

Continue to see a return to "normal" supply, demand, and trade fundamentals

Expect a seasonal price pattern consistent with current prices

Negative profits on average nationwide -> end of expansion

Expect to turn the corner on the cattle cycle which will help prices going into 2018

Recovery in pasture conditions will dictate profitability in much of Georgia



# Poultry



#### **BROILER PRODUCTION**





Data Source: USDA-AMS & USDA-NASS Livestock Marketing Information Center

2017 Georgia Ag Forecast





#### **RTC BROILER PRODUCTION**

US, Quarterly



Data Source: USDA-NASS, Forecasts by LMIC

**Livestock Marketing Information Center** 



#### **BROILER PRICES**

#### National Composite, Weekly



Data Source: USDA-AMS Livestock Marketing Information Center

**2017** Georgia **Ag Forecast** 



#### **Poultry Outlook Summary**

Expect continued increases in production, but slower growth than previous year

Exports will be even more important in 2017 due to higher production, but expect higher domestic supplies

Competing meats will add downward pressure to prices

Continued low feed costs will ultimately determine profitability in 2017



# Hogs



#### **HOG SLAUGHTER**

#### Federally Inspected, Weekly



Data Source: USDA-AMS & USDA-NASS Livestock Marketing Information Center

**2017** Georgia **Ag Forecast** 



#### **COMMERCIAL PORK PRODUCTION**

US, Quarterly



Data Source: USDA-NASS, Forecasts by LMIC

Livestock Marketing Information Center

**2017** Georgia **Ag Forecast** 



#### **FEEDER PIG PRICES**

40 Pounds, Weekly



**Data Source: USDA-AMS** Livestock Marketing Information Center



Estimated Returns to Farrow to Finish, Iowa





Source: Lee Schulz, Iowa State University



#### Hog Outlook Summary

Slower growth in production assisted in part by increases in packing capacity

As with other meats, increasing production of competing product will put negative pressure on prices

Exports will be a key factor in buoying prices, in addition to a willingness of domestic consumers to absorb increasing supplies

Likely to see a recovery in profits early in the year with feed costs expected to catch up later in the year







#### US All Milk Price (\$/cwt)



Average Peak-to-Peak Increase of 11%









Global Markets Have Put Pressure on US Prices







#### Summary

- All Milk Price: \$17.25 19.00 Georgia Mailbox: \$20.11 - \$22.00
- Feed prices remain favorable
- Commodity stocks (cheese/butter) are still high but not alarmingly so
- Export demand shows signs of improvement
- Global dairy prices show signs of strengthening





## **Keynote Address**

Brent Credille Assistant Professor, UGA College of Veterinary Medicine Food Animal Health and Management Program



## ANTIMICROBIAL USE IN LIVESTOCK

## IMPLICATIONS OF NEW FDA REGULATIONS

BRENT CREDILLE, DVM, PHD, DACVIM ASSISTANT PROFESSOR FOOD ANIMAL HEALTH AND MANAGEMENT PROGRAM COLLEGE OF VETERINARY MEDICINE UNIVERSITY OF GEORGIA

### **OVERVIEW**

#### Background

- Antimicrobial Resistance
  - Human medicine
  - Animal agriculture

#### FDA Guidances 209 and 213

- What They Say
- What They Mean

Implications for Livestock Production







#### **Georgia Beef Indusry**

- 15,000 beef cattle operations in Georgia
  - 489,000 beef cows
    - < 30 head/farm</p>
  - ~500,000 calves born
  - ~ \$1 billion farm gate value
    - \$750 million for cow-calf
    - \$200 million for stockers

### BACKGROUND



### BACKGROUND

**Antimicrobial resistance (Humans)** 

- Significant public health threat
  - 2 million infections yearly
  - 23,000 deaths
- Tremendous economic burden on healthcare industry
  - \$20 billion in direct costs
  - \$35 billion in indirect costs
- Driven by overuse of antimicrobials
  - 50% of all anitmicrobial presciptions unnecessary (humans)

### BACKGROUND

Antimicrobial Resistance (Livestock)

• Antimicrobials used for promotion of growth, improvement in feed efficiency, and treatment and control of various diseases

#### • Current estimates:

- Livestock responsible for 80% of all antimicrobial sales
  - 95% of all medically important antimicrobials sold on a per kg basis for administration in food or water
    - 74% in feed
    - 21% in water
  - 98% of medically important antimicrobials available over the counter



#### Antimicrobials Sold in U.S.

ANTIMICROBIAL DRUGS APPROVED FOR USE IN FOOD-PRODUCING ANIMALS<sup>\*</sup> ACTIVELY MARKETED IN 2014 SALES AND DISTRIBUTION DATA REPORTED BY DRUG CLASS



# FDA REGULATIONS: WHAT THEY SAY AND WHAT THEY MEAN

#### Why Are We Using Antimicrobials (Cow-Calf)

Percentage of cow/calf operations that used antibiotics, by cattle class and primary purpose of use, 2007-2008

	Primary purpose	Percentage of operations
	Any purpose	15.8
	Preweaned calves	
	Prevent respiratory disease	8.0
	Other	1.1
	Any	8.5
	Replacement heifers weaned but not yet calved	
<	Prevent respiratory disease	9.6
	Promote growth	2.6
	Other	0.3
	Any	9.9
	Other calves weaped but not yet shipped for feeding or sold as breeding stock	
	Prevent respiratory disease	11.6
	Promote growth	3.4
	Other	0.3
	Any	11.8
#### Why Are We Using Antimicrobials (Feedlot)

	Disease		Dise	ase	Growth		
Antibiotic	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Total
Ionophores (e.g., Rumensin, Cattlyst)	16.2	(3.4)	0.6	(0.5)	83.3	(3.4)	100.0
Coccidiostats (e.g., Corid, Deccox)	61.4	(8.1)	35.6	(8.0)	3.0	(2.8)	100.0
Bacitracin (BMD, Fortracin, Albac)	NA						
Chlortetracycline (Aureomycin100, CTC)	74.1	(4.9)	23.7	(4.8)	2.2	(1.5)	100.0
Chlortetracycline/ sulfamethazine (Aureo S 700, MoorMan's, Beef Cattle Boost)	82.0	(9.3)	18.0	(9.3)	0.0	(—)	100.0
Neomycin (Biosol, Neomix325)*							
Oxytetracycline (OTC, Terramycin, TM50)*							
Sulfamethazine/ sulfadimethoxine (Albon, Sulmet)*							
Tetracycline (Tetrasure, T-Vet)	NA						
Tylosin (Tylan)	68.0	(6.8)	3.7	(2.4)	28.3	(6.8)	100.0

#### **Antimicrobial Resistance**

- Public perception
  - Use of antimicrobials for growth promotion is not justified
  - Antimicrobial use (or overuse) in livestock is driving the increase in prevalence of resistant bacteria

#### Current concern

- Resistant bacteria are being transmitted from animals to people through the food supply
- Infections untreatable because of misuse of medically important drugs in livestock



Why The Concern?

- Resistance to important antimicrobials develops due to their use in animal agriculture
  - Sub-therapeutic uses (growth promotion)
- Rise in prevalence of untreatable infections in people
  - Increased risk of death in people with these diseases
  - Greater costs transferred to healthcare system



#### Antimicrobial resistance

- CDC (Antibiotic resistance threats in the Unites States, 2013)
  - Ranked resistant bacteria by threat level
    - Urgent
    - Serious
    - Concerning
  - 4 organisms ranked as serious threat level seem to originate from food supply, 2 have origin in animals
    - Campylobacter
    - Salmonella





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**Antimicrobial Resistance (Livestock)** 

• Resistance in Mannheimia haemolytica an emerging threat



**Antimicrobial Resistance (Livestock)** 

 Proportion of *M. haemolytica* isolates resistant to selected antimicrobials (AM) before (Day 0) and 10 to 14 days after metaphylaxis with tulathromycin (Day 14)



#### Antibiotic susceptibility Pattern

	Mannheimia haemolytica		Mannheimia haemolytica			Mannheimia haemolytica			
	Interpretation	MIC	Test Range	Interpretation	MIC	Test Range	Interpretation	MIC	Test Range
Ampicillin	S			S			S		
Ceftiofur(3rd gen.)	S			S			S		
Enrofloxacin	S			S			s		
Florfenicol	s			s			S		
Gamithromycin	S			S			S		
Penicillin	S			S			S		
Tetracycline	S			S			S		
Tulathromycin	S			S			S		

#### Antibiotic susceptibility Pattern

	Mannheimia haemolytica		Mannheimia haemolytica			Mannheimia haemolytica			
	Interpretation	MIC	Test Range	Interpretation	MIC	Test Range	Interpretation	MIC	Test Range
Ampicillin	S			S			S		
Ceftiofur(3rd gen.)	8			s			s		
Enrofloxacin	R			R			R		
Florfenicol	R			R			R		
Gamithromycin	R			R			R		
Penicillin	S			S			S		
Tetracycline	R			R			R		
Tulathromycin	R			R			R		

#### HOW MUCH BACTERIA IS IN BEEF?





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#### ConsumerReports'

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**Consumer Demands** 

- Organic food sales increased significantly since 2004
  - \$11 billion in 2004 vs \$32 billion in 2013
- 11 of 13 largest grocery retailers offer organic or "antibiotic free" meet
- Multiple food chains (McDonald's) sourcing antibiotic free meat



What Is A Medically Important Antimicrobial?

- An antimicrobial drug (or drug class) used to treat pathogens that cause food borne disease
- An antimicrobial drug that is a sole therapy or one of few alternatives to treat serious human disease
- An antimicrobial drug (or drug class) used to treat enteric pathogens in non-food borne illness
- No cross resistance within or between drug classes and difficulty transmitting resistance elements between bacterial species

What Is A Medically Important Antimicrobial?

- Ranking
  - Critically important Meet criteria 1 and 2
  - Highly important Meet either 1 or 2
  - Important Meet either 3, 4, or 5

What Is A Medically Important Antimicrobial?

- Penicillins Penicillin, Naxcel, Excenel, Excede
- Tetracyclines Aureomycin, LA 200
- Macrolides Draxxin, Micotil, Zactran, Zuprevo
- Fluoroquinolones Baytril, Advocin
- Sulfas Albon, AS700, Sustain Calf Boluses
- Aminoglyocosides Neomycin, Spectinomycin

Three recent changes in antimicrobial use regulations

- April 2012
  - Ban on extra-label use of cephalosporins (Naxcel, Excenel, Excede) in major food producing species (Cattle, Swine, Poultry)
  - Guidance for Industry 209
    - Framework for judicious use of antimicrobials in livestock
- December 2013
  - Guidance for Industry 213
    - Framework for implementation of measures proposed on GFI 209

**Guidance for Industry 209** 

- FDAs current thinking on topic of judicious antimicrobial use
  - Two ways to ensure judicious drug use
    - Limiting the use of medically important antimicrobials to uses that are considered necessary for assuring animal health
      - Growth promotion and feed efficiency not considered necessary for assuring animal health
    - Limiting the use of antimicrobials to uses that require veterinary oversight or consultation.
      - ALL antimicrobial use should require a valid veterinary client patient relationship (VCPR)

**Guidance for Industry 213** 

- Gradual and voluntary phasing out of antimicrobial use for promotion of feed efficiency and weight gain
  - All in feed or water use of medically important antimicrobials must involve input of a veterinarian
  - All in feed or water use of medically important antimicrobials VFD (feed) or prescription (water) only
    - No more over-the-counter use
- Established 3 year period for pharmaceutical companies to comply
  - Quickly adopted by most companies
  - December 2016

Implications

- No further use of ANY medically important antimicrobials to promote feed efficiency and weight gain
  - Regardless of a valid prescription
  - Use in this manner ILLEGAL
- ALL in feed and water antimicrobial use requires input of a veterinarian
  - Valid veterinary-client-patient relationship
  - Veterinarian must be licensed in state in which animals are housed

### GFI 209 AND 213

#### Antimicrobials Affected by VFD Regulations

Generic Name	Trade Names
Chlortetracycline	Aureomycin, CLTC, Pennchlor
Chlortetracycline + Sulfamethazine	Aureo S 700
Neomycin + Oxytetracycline	Neo-Terramycin, Neo-Oxy
Oxytetracycline	Terramycin, Pennox
Tylosin	Tylan
Tilmicosin	Pulmotil
Virginiamycin	V-Max

### GFI 209 AND 213

#### Pharmaceuticals Not Affected by VFD Regulations

Generic Name	Trade Names
Amprolium	Corid
Bacitracin	Albac, BMD
Bambermycin	GainPro
Decoquinate	Deccox
Laidlomycin	Cattlyst
Monensin	Rumensin
Lasalocid	Bovatec

#### Implications

- Use of ionophores (Rumensin, Bovatec) not affected
  - Unless combined with a medically important antimicrobial
- Use of antimicrobials for treatment and prevention of disease still allowed
  - Stocker operator purchasing high risk cattle and using Draxxin for arrival metaphylaxis
  - For NOW!!

**Economic Impact** 

- Producers currently using antimicrobials for growth promotion
  - 1 to 3 % increase in cost of production
  - 1% increase in wholesale price
  - 1 to 2 % decrease in total production
- Producers not using antimicrobials for production purposes
  - Increased production and higher revenues as a response to higher prices

#### **Recent Developments**

- California Bill SB 27 (in effect in 2018)
  - Most restrictive antimicrobial use guidelines in nation
  - Removal of ALL medically important antimicrobials from OTC status
    - Penicillin
    - LA200
    - Tylan
    - Albon

#### Implications

- What the future holds is hard to predict
  - Will more restrictive regulations be placed on animal agriculture?
    - Lose ability to use certain drugs for disease prevention?
- Management strategies to maximize animal health must become a priority
  - Biosecurity
  - Vaccination
  - Deworming
  - Preconditioning

What's the Take Away for Cattle Producers

- Develop a relationship with a veterinarian that knows their operation
- Focus on antimicrobial stewardship
  - Decide if a non-antibiotic alternative exists for treating, controlling, and preventing disease
  - Select antibiotics that have been proven safe and effective for a certain purpose

What's the Take Away for Cattle Producers

- Focus on Antimicrobial Stewardship
  - Focus on disease prevention
  - Diagnose sick animals quickly and accurately
  - Select antimicrobials appropriate for the condition being treated
  - Keep records

Implementation of Prudent Use Guidelines

- Have a veterinary client patient relationship (VCPR)
- Establish written treatment protocols
- Understand extra-label drug use (ELDU)
- Train personnel working on the operation

Avent, OSU	Preconditioned	Non-Precond
% Sick	9.2	36.4
% Death Loss	1.5	4.3
ADG (lbs/day)	2.9	2.6
Feed conversion	6.3	6.9
% Choice	50.4	35.8
% Outs	2.5	6.9

	Auction Market	Preconditioned
ADG, lb	1.9	2.67
Morbidity,%	67.2	7.7
3 Treats,%	8.0	3.2
Chronics,%	1.1	0.4
Med Costs,\$	18.49	2.31

Item	Non-preconditioned	Preconditioned
Performance		
Feedlot in wt, lb	550	640
Feedlot wt gain, lb	616	540
Days on feed	220	180
Daily gain, lb	2.80	3.00
Feed:Gain, DM basis	6.60	6.02
Medicine, S/head	34.00	4.33
Death loss, %	4.44	1.30
Feedlot COG, \$/cwt	62.80	54.75
Economics		
Preconditioning costs, \$/head	-	40
Feedlot COG, \$/head	386.85	295.65
Fed heifer value, 8/head	795.33	804.88
Value minus total costs, S/head	408.48	469.23
Difference in net value, \$/head	-	60.72

- More efficient gains
- Higher value carcasses
- Reduced medication costs
- Less death loss
- Increased profit potential





Some evidence suggests use of antimicrobials in cattle drives antimicrobial resistance

• Scapegoats?

Our patterns of drug use MUST change

• Not because we want to, because we HAVE to

Management must become a priority

- Maintain or open doors for the future
  - Marketing opportunities

### QUESTIONS?


### **Questions & Answers**

#### Kent Wolfe Director, UGA Center for Agribusiness & Economic Development





#### Invocation

#### George Chambers *Member,* Georgia Farm Bureau Board





## Networking Luncheon



## **Industry Remarks**

#### Ricky Lane 3<sup>rd</sup> District Field Representative, Georgia Farm Bureau



## **Industry Remarks**

Paul Thompson Atlanta Farmers Market Manager, Georgia Department of Agriculture





# Thank you for attending!

