



AgriCenter International

2015 BioAg Product Demo in Cotton

Trial ID: 2015 BioAg Cotton Location: Agricenter Trial Year: 2015
 Protocol ID: 2015 BioAg Cotton Investigator: K Bruce Kirksey
 Project ID: Study Director: Dr. K. Bruce Kirksey
 Sponsor Contact: Anton Barton

Reps: 4 Plots: 12.6 by 30 feet
 Spray vol: 10 GAL/AC Mix Size: 2 liters (calculated mix size 1.3139)

Trt No.	Treatment Name	Form Type	Rate	Growth Stage	Appl Code	Appl Description	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	Standard Fertility Practice							103	202	304	403
2	Soil and Seed	L	8 pt/a	ATPLAN	A	PRE	200.0 ml/mx	102	203	302	401
	Balance and Grow	L	54 fl oz/a		B	First bloom	84.37 ml/mx				
	Fruit and Balance	L	68 fl oz/a		C	With PIX	106.2 ml/mx				
3	Standard Fertility Practice <15%							104	201	303	404
	Soil and Seed	L	8 pt/a	ATPLAN	A	PRE	200.0 ml/mx				
	Balance and Grow	L	54 fl oz/a		B	First bloom	84.37 ml/mx				
	Fruit and Balance	L	68 fl oz/a		C	With PIX	106.2 ml/mx				
4	Standard Fertility Practice							101	204	301	402
	Soil and Seed	L	8 pt/a	ATPLAN	A	PRE	200.0 ml/mx				

Sort Order: Treatment

General Trial Information

Study Director: Dr. K. Bruce Kirksey **Title:** Director of Research
Investigator: Dr. K. Bruce Kirksey **Title:** Director of Farm and Research

Discipline: D fertilizer

Trial Location

City: Memphis **Country:** USA United States
State/Prov.: Tennessee
Postal Code: 38120 **Climate Zone:** EPPOSE EPPO South East

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Dr. K. Bruce Kirksey **Title:** Director of Research
Organization: Agricenter International
Address: 7777 Walnut Grove Road **Phone No.:** 901-757-7754
City+State/Prov: Memphis, TN **Mobile No.:** 901-355-9124
Postal Code: 38120 **E-mail:** bkirksey@agricenter.org
Country: USA United States

Investigator: Dr. K. Bruce Kirksey **Title:** Director of Farm and Research
Organization: Agricenter International
Address: 7777 Walnut Grove Road **Phone No.:** 901-757-7754
City+State/Prov: Memphis, TN **Mobile No.:** 901-355-9124
Postal Code: 38120 **E-mail:** bkirksey@agricenter.org
Country: USA United States

Cooperator/Landowner

Cooperator: Anton Barton
Organization: BioAg
Country: AUS Australia

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: PHY 499WRF **BBCH Scale:** BCOT
Planting Rate, Unit: 55000 S/A **Planting Date:** Jun-1-2015
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Row Spacing, Unit: 38 IN
Harvest Date: Nov-13-2015
Harvested Width, Unit: 6.3 FT
Harvested Length, Unit: 25 FT
Harvest Equipment: International 782 Series 2

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Site and Design

Treated Plot Width: 12.6 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 378 FT² **Treatments:** 4 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: Strip Field
% Sand: 13.6 **% OM:** 1.3 **Texture:** SIL silt loam
% Silt: 61.6 **pH:** 7.3 **Soil Name:** Falaya
% Clay: 24.6 **CEC:** 6.8 **Fert. Level:** G good
 Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Jun-1-2015	Jul-13-2015	Jul-27-2015
Application Method:	SPRAY	SPRAY	SPRAY
Application Placement:	BROSOL	BROFOL	BROFOL
Applied By:	Kirksey		
Air Temperature, Unit:	72 F	90 F	95 F
% Relative Humidity:	45		
Wind Velocity, Unit:	2 MPH	4 MPH	3 MPH
Wind Direction:	SSW		
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	68 F	80 F	82 F
Soil Moisture:	EXCELL	GOOD	GOOD
% Cloud Cover:	50	25	25

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	00	59	65

Application Equipment

	A	B	C
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 Backpack
Equipment Type:	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	FLAFAN	FLAFAN	FLAFAN
Nozzle Size:	8002	8002	8002
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	6 FT	6 FT	6 FT
Boom Height, Unit:	19 IN	19 IN	19 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	3 liters	3 liters	3 liters
Propellant:	COMCO2	COMCO2	COMCO2



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				GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT
Crop Code				Gossypium hirs>	Gossypium hirs>	Gossypium hirs>	Gossypium hirs>
BBCH Scale				American uplan>	American uplan>	American uplan>	American uplan>
Crop Scientific Name				PHY 499WRF	PHY 499WRF	PHY 499WRF	PHY 499WRF
Crop Name				PLAEME C	PLAEME C	SEECOT C	SEECOT C
Crop Variety				Jun-15-2015	Jun-15-2015	Nov-13-2015	Nov-13-2015
Part Rated				STAOBJ	STAOBJ	YIELD	YIELD
Rating Date				NUMBER	NUMBER	lb/plot	LB
Rating Type				6 FT	6 FT	1 PLOT	1 A
Rating Unit				1	1	1	1
Sample Size, Unit				14 14	14 14	165 109	165 109
Number of Subsamples				14 DP-1	14 DP-1	165 DP-1	165 DP-1
Days After First/Last Applic.							
Plant-Eval Interval					T1		TY2
ARM Action Codes							1
Number of Decimals							
Trt No.	Treatment Name	Rate	Appl Code	Plot 1	Plot 2	Plot 3	Plot 4
1	Standard Fertility Practice		103	23.0	52730.53158884210	9.700	2682.7
	Standard Fertility Practice		202	23.0	52730.53158884210	8.300	2295.5
			304	21.0	48145.26797242100	6.900	1908.3
			403	23.0	52730.53158884210	7.100	1963.7
			Mean =	22.5	51584.21568473690	8.000	2212.6
2	Soil and Seed	8 pt/a	A 102	23.0	52730.53158884210	10.000	2765.7
	Balance and Grow	54 fl oz/a	B 203	25.0	57315.79520526310	9.700	2682.7
	Fruit and Balance	68 fl oz/a	C 302	23.0	52730.53158884210	10.400	2876.3
			401	22.0	50437.89978063160	10.350	2862.5
			Mean =	23.3	53303.68954089470	10.113	2796.8
3	Standard Fertility Practice < 15%		104	24.0	55023.16339705260	10.400	2876.3
	Soil and Seed	8 pt/a	A 201	22.0	50437.89978063160	12.100	3346.5
	Balance and Grow	54 fl oz/a	B 303	23.0	52730.53158884210	11.800	3263.5
	Fruit and Balance	68 fl oz/a	C 404	24.0	55023.16339705260	10.900	3014.6
			Mean =	23.3	53303.68954089470	11.300	3125.3
4	Standard Fertility Practice		101	24.0	55023.16339705260	9.700	2682.7
	Soil and Seed	8 pt/a	A 204	24.0	55023.16339705260	8.750	2420.0
			301	24.0	55023.16339705260	8.800	2433.8
			402	21.0	48145.26797242100	8.550	2364.7
			Mean =	23.3	53303.68954089470	8.950	2475.3



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	Sponsor Contact: Anton Barton	

Crop Code				GOSHI
BBCH Scale				BCOT
Crop Scientific Name				Gossypium hirs>
Crop Name				American uplan>
Crop Variety				PHY 499WRF
Part Rated				LINT C
Rating Date				Nov-13-2015
Rating Type				YIELD
Rating Unit				LB
Sample Size, Unit				1 A
Number of Subsamples				1
Days After First/Last Applic.				165 109
Plant-Eval Interval				165 DP-1
ARM Action Codes				T3
Number of Decimals				1
Trt No.	Treatment Name	Rate	Appl Code	Plot
1	Standard Fertility Practice			5
	Standard Fertility Practice		103	1046.3
			202	895.3
			304	744.3
			403	765.8
			Mean =	862.9
2	Soil and Seed	8 pt/a	A	102
	Balance and Grow	54 fl oz/a	B	203
	Fruit and Balance	68 fl oz/a	C	302
			401	1116.4
			Mean =	1090.8
3	StandardFertilityPractice<15%			104
	Soil and Seed	8 pt/a	A	201
	Balance and Grow	54 fl oz/a	B	303
	Fruit and Balance	68 fl oz/a	C	404
			Mean =	1218.9
4	Standard Fertility Practice			101
	Soil and Seed	8 pt/a	A	204
			301	949.2
			402	922.2
			Mean =	965.4



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Crop Code
 GOSHI, BCOT, Gossypium hirsutum, = US
Part Rated
 PLAEME = plant - emerged
 SEECOT = seed cotton
 LINT = lint
 C = Crop is Part Rated
Rating Type
 STAOBJ = stand - objective (based on counts)
 YIELD = yield
Rating Unit
 NUMBER = number
 lb/plot = pounds per plot
 LB = pound

 FT = foot
 PLOT = total plot
 A = acre
Plant-Eval Interval
 14 DP-1 = 1 GOSHI Jun-1-2015
 165 DP-1 = 1 GOSHI Jun-1-2015
ARM Action Codes
 T1 = [1]*43560/19
 TY2 = 276.5714*[3]
 T3 = [4]*.39

	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT
Crop Code	GOSHI	GOSHI	GOSHI	GOSHI
BBCH Scale	BCOT	BCOT	BCOT	BCOT
Crop Scientific Name	Gossypium hirs>	Gossypium hirs>	Gossypium hirs>	Gossypium hirs>
Crop Name	American uplan>	American uplan>	American uplan>	American uplan>
Crop Variety	PHY 499WRF	PHY 499WRF	PHY 499WRF	PHY 499WRF
Part Rated	PLAEME C	PLAEME C	SEECOT C	SEECOT C
Rating Date	Jun-15-2015	Jun-15-2015	Nov-13-2015	Nov-13-2015
Rating Type	STAOBJ	STAOBJ	YIELD	YIELD
Rating Unit	NUMBER	NUMBER	lb/plot	LB
Sample Size, Unit	6 FT	6 FT	1 PLOT	1 A
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	14 14	14 14	165 109	165 109
Plant-Eval Interval	14 DP-1	14 DP-1	165 DP-1	165 DP-1
ARM Action Codes		T1		TY2
Number of Decimals				1
Trt No.	1	2	3	4
Treatment Name	Standard Fertility Practice	Standard Fertility Practice	Standard Fertility Practice	Standard Fertility Practice
Rate	22.5 a	51584.21568473690 a	8.000 c	2212.6 c
Rate Unit				
Appl Code				
1 Standard Fertility Practice	22.5 a	51584.21568473690 a	8.000 c	2212.6 c
2 Soil and Seed	23.3 a	53303.68954089470 a	10.113 ab	2796.8 ab
Balance and Grow				
Fruit and Balance				
3 StandardFertilityPractice<15%	23.3 a	53303.68954089470 a	11.300 a	3125.3 a
Soil and Seed				
Balance and Grow				
Fruit and Balance				
4 Standard Fertility Practice	23.3 a	53303.68954089470 a	8.950 bc	2475.3 bc
Soil and Seed				
LSD P=.05	2.00	4584.079099323480	1.3907	384.62
Standard Deviation	1.25	2865.789760263710	0.8694	240.45
CV	5.42	5.42	9.07	9.07
Bartlett's X2	0.729	0.729	5.167	5.167
P(Bartlett's X2)	0.866	0.866	0.16	0.16
Skewness	-0.4595	-0.4595	-0.2124	-0.2124
Kurtosis	-0.1649	-0.1649	-0.2429	-0.2429
Replicate F	0.680	0.680	0.513	0.513
Replicate Prob(F)	0.5861	0.5861	0.6831	0.6831
Treatment F	0.360	0.360	10.822	10.822
Treatment Prob(F)	0.7834	0.7834	0.0024	0.0024

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Rating Unit				LB
Sample Size, Unit				1 A
Number of Subsamples				1
Days After First/Last Applic.				165 109
Plant-Eval Interval				165 DP-1
ARM Action Codes				T3
Number of Decimals				1
Trt No.	Treatment Name	Rate	Appl Code	
		Rate Unit		5
1	Standard Fertility Practice Standard Fertility Practice			862.9 c
2	Soil and Seed Balance and Grow Fruit and Balance	8 pt/a 54 fl oz/a 68 fl oz/a	A B C	1090.8 ab
3	StandardFertilityPractice<15% Soil and Seed Balance and Grow Fruit and Balance	8 pt/a 54 fl oz/a 68 fl oz/a	A B C	1218.9 a
4	Standard Fertility Practice Soil and Seed	8 pt/a	A	965.4 bc
LSD P=.05				150.00
Standard Deviation				93.78
CV				9.07
Bartlett's X2				5.167
P(Bartlett's X2)				0.16
Skewness				-0.2124
Kurtosis				-0.2429
Replicate F				0.513
Replicate Prob(F)				0.6831
Treatment F				10.822
Treatment Prob(F)				0.0024



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STAOBJ = stand - objective (based on counts)

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