Wheat, Rye, Oats, and ryegrass response to Chateau and Dual Magnum.

Trial ID: Wheat4-08 Study Dir.: Stanley Culpepper
Location: Ponder Farm Investigator: Stanley Culpepper

Reps: 3 Plots: 24 by 15 feet

Spra	ay vol: 14.8 gal/a	IC	M	ix size:	1 liter	s (min	1.389	)					
	Treatment			Form				Appl	Amt Product	Plot N	lo. By I	Rep	
No.	Name	Conc	Unit	Type	Rate	Unit	Stg	Code	to Measure	1	2	3	
1	PRE							Α		101	204	302	
	Chateau	51		DG	3	OZ/A		Α	1.518 g/mx				
2	PRE							Α		102	211	303	ĺ
	Chateau	51		DG	6	OZ/A		Α	3.036 g/mx				
3	PRE							Α		103	206	308	ĺ
	Dual Magnum	7.64		L	1	PT/A		Α	8.445 ml/mx				
4	PRE							Α		104	207	304	ĺ
	Chateau	51		DG	_	OZ/A		Α	1.518 g/mx				ĺ
	Dual Magnum	7.64		L	1	PT/A		Α	8.445 ml/mx				
5	PRE							Α		105	214	309	ĺ
	Non-treated							Α					
6	Spike							В		106	205	311	ĺ
	Chateau	51		DG	3	OZ/A		В	1.518 g/mx				
7	Spike							В		107	210	306	ĺ
	Chateau	51		DG	6	OZ/A		В	3.036 g/mx				
8	Spike							В		108	201	313	ĺ
	Dual Magnum	7.64		L	1	PT/A		В	8.445 ml/mx				
9	Spike							В		109	202	315	ĺ
	Chateau	51		DG		OZ/A		В	1.518 g/mx				ĺ
	Dual Magnum	7.64		L	1	PT/A		В	8.445 ml/mx				
10	Spike							В		110	212	307	ĺ
	Non-treated							В					
11	One-three leaf							С		111	203	301	ĺ
	Chateau	51		DG	3	OZ/A		С	1.518 g/mx				
12	One-three leaf							С		112	209	314	ĺ
	Chateau	51		DG	6	OZ/A		С	3.036 g/mx				
13	One-three leaf							С		113	208	312	
	Dual Magnum	7.64		L	1	PT/A		С	8.445 ml/mx				
14	One-three leaf							С		114	215	310	
	Chateau	51		DG		OZ/A		С	1.518 g/mx				ĺ
	Dual Magnum	7.64		L	1	PT/A		С	8.445 ml/mx				
15	One-three leaf							С		115	213	305	
	Non-treated							С					1

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
22.771	g	Chateau	51	DG	
63.338	ml	Dual Magnum	7.64	L	

<sup>\* &#</sup>x27;Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).

<sup>\*</sup> Product amount calculations increased 25 % for overage adjustment.

### Jun-12-09 (Wheat4-08) Trial Comments Page 2 of 8

## **University of Georgia**

Wheat, Rye, Oats, and ryegrass response to Chateau and Dual Magnum.

Trial ID: Wheat4-08 Study Dir.: Stanley Culpepper Location: Ponder Farm Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine ryegrass, wheat, oat, and rye response to Chateau and Dual applied at planting and POST.

#### Ryegrass Response:

1. Ryegrass was not tolerant to Chateau (either rate) or Dual Magnum applied at planting or POST. The greatest level of tolerance was noted with the 1-leaf application compared to a spike or PRE application.

### Wheat and Rye Response:

1. Wheat was safe with 3 oz of Chateau or Dual Magnum applied to the 2-leaf stage only. Injury was also less than 15% with the 6 oz of Chateau but greater than 20% with Chateau + Dual applied at this growth stage.

### Oat Response:

1. Injury was severe with all at plant or spike applications. Only Dual Magnum applied to 1 leaf oat caused less than 15% injury.

Wheat, Rye, Oats, and ryegrass response to Chateau and Dual Magnum.

Trial ID: Wheat4-08 Study Dir.: Stanley Culpepper Location: Ponder Farm Investigator: Stanley Culpepper

Location: Ponde.	I I GI III		1111000	i gacor i	staniey Ct	ripepper			
Crop Code		LOLMU	LOLMU	LOLMU	LOLMU	LOLMU	TRZAW	TRZAW	TRZAW
Rating Data Type		injury	injury	injury	injury	injury	injury	injury	injury
Rating Unit		%	%	%	%	%	%	%	%
Rating Date		Dec-31-08	Jan-07-08	Jan-21-08	Feb-26-08	May-05-08	Dec-31-08	Jan-07-08	Jan-21-08
Assessed By		SC	SC	SC	SC	SC	SC	SC	SC
Trt-Eval Interval		379 DA-B	20 DA-B	34 DA-B	70 DA-B	139 DA-B	379 DA-B	20 DA-B	34 DA-B
Trt Treatment	Rate								
No. Name	Rate Unit	1	2	3	4	5	6	7	8
1 PRE		96 a	99 a	96 a	93 a	80 b	23 d	45 c	38 cde
Chateau	3 OZ/A	33 u	<b>33</b> G	33 G	00 G				00 000
2 PRE		99 a	99 a	99 a	98 a	99 a	40 c	65 b	68 b
Chateau	6 OZ/A	33 a	33 a	33 a	30 a	33 a	<del>-10</del> C	03 5	00 0
	0 02/1	00.5	00	00 -	00 -	05.5	47 40	07 40	20 45
3 PRE	4 DT/A	99 a	96 a	99 a	99 a	95 a	17 de	27 de	30 de
Dual Magnum	1 PT/A								
4 PRE	- 0-/-	99 a	99 a	99 a	99 a	98 a	90 a	95 a	98 a
Chateau	3 OZ/A								
Dual Magnum	1 PT/A								
5 PRE		0 d	0 e	0 e	0 e	0 e	0 f	0 f	0 g
Non-treated									
6 Spike		87 b	96 a	99 a	91 ab	70 bc	13 def	28 de	40 cd
Chateau	3 OZ/A								
7 Spike		96 a	99 a	99 a	99 a	92 a	13 def	35 cd	49 c
Chateau	6 OZ/A								
8 Spike		42 c	68 b	59 b	80 b	63 c	7 ef	10 f	23 ef
Dual Magnum	1 PT/A								
9 Spike		98 a	99 a	99 a	99 a	99 a	70 b	86 a	96 a
Chateau	3 OZ/A		33 a	33 a	33 a	35 a	70 5	00 a	50 a
Dual Magnum	1 PT/A								
10 Spike	,,,	0 d	0 e	0 e	0 e	0 e	0 f	0 f	0 g
Non-treated		o u	0 6	0 6	0 6	0 6	0 1	0 1	υg
		0 4	45 4	07	<b>50</b> -	27 4	0.4	0 4	7
11 One-three leaf Chateau		0 d	15 d	27 cd	58 c	37 d	0 f	0 f	7 g
	3 OZ/A								
12 One-three leaf		0 d	18 d	47 bc	94 a	73 bc	0 f	6 f	13 fg
Chateau	6 OZ/A								
13 One-three leaf		0 d	0 e	8 de	38 d	12 e	0 f	0 f	0 g
Dual Magnum	1 PT/A								
14 One-three leaf		0 d	27 c	50 b	99 a	91 a	0 f	22 e	12 fg
Chateau	3 OZ/A								
Dual Magnum	1 PT/A								
15 One-three leaf		0 d	0 e	0 e	0 e	0 e	0 f	0 f	0 g
Non-treated									
LSD (P=.05)		7.5	7.9	21.2	11.2	11.1	12.1	11.0	14.4
Standard Deviation		4.5	4.7	12.7	6.7	6.6	7.2	6.6	8.6
CV		9.45	8.71	21.6	9.57	10.94	39.49	23.52	27.25
Bartlett's X2		9.393	3.827	12.443	11.966		10.88		19.597
P(Bartlett's X2)		0.052	0.575		0.035*	0.009*	0.144	0.589	0.033*
· (Bartiott o /\Z)		J.00Z	3.070	0.020	5.000	5.000	J. 1 1 T	5.000	0.000

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

					olty !		<del>Ji gia</del>			
Cro	o Code		TRZAW	TRZAW	SECCE	SECCE	SECCE	SECCE	SECCE	AVESA
Rati	ng Data Type		injury	injury	injury	injury	injury	injury	injury	injury
Rati	ng Unit		%	%	%	%	%	%	%	%
Rati	ng Date		Feb-26-08	May-05-08	Dec-31-08	Jan-07-08	Jan-21-08	Feb-26-08	May-05-08	Dec-31-08
Ass	essed By		SC	SC	SC	SC	SC	SC	SC	SC
Trt-E	Eval Interval		70 DA-B	139 DA-B	379 DA-B	20 DA-B	34 DA-B	70 DA-B	139 DA-B	379 DA-B
Trt	Treatment	Rate								
No.	Name	Rate Unit	9	10	11	12	13	14	15	16
1	PRE		38 c	15 cd	43 c	45 d	29 cd	30 c	15 de	82 b
	Chateau	3 OZ/A								
2	PRE		53 b	38 b	63 b	72 c	60 b	43 b	33 bc	93 ab
1 -	Chateau	6 OZ/A	00 5	00 2	00 2	, 2 0	00 2	.0 5	00 50	00 45
3	PRE	0 02/1	22 d	10 cd	12 e	20 e	30 cd	12 def	13 de	43 c
3	Dual Magnum	1 PT/A	22 U	10 Cu	12 6	20 6	30 Ca	12 dei	13 46	45 0
	PRE	1 1 1//	00.5	70 -	04.5	00	00.5	07.5	00.0	07.5
4	Chateau	3 OZ/A	90 a	73 a	94 a	98 a	98 a	97 a	80 a	97 a
	Dual Magnum	3 OZ/A 1 PT/A								
_		I FI/A	0.1	0 1	2 (	0 (	0.1	- ·		0 1
5	PRE		0 f	0 d	0 f	0 f	0 f	0 f	0 e	0 d
-	Non-treated									
6	Spike		35 c	20 bcd	25 d	28 e	25 d	16 cde	17 de	40 c
	Chateau	3 OZ/A								
7	Spike		38 c	25 bc	28 d	38 d	42 c	25 cd	23 cd	43 c
	Chateau	6 OZ/A								
8	Spike		13 de	7 cd	11 ef	8 f	20 de	8 ef	7 de	32 c
	Dual Magnum	1 PT/A								
9	Spike		93 a	65 a	70 b	83 b	93 a	93 a	48 b	88 ab
	Chateau	3 OZ/A								
	Dual Magnum	1 PT/A								
10	Spike		0 f	0 d	0 f	0 f	0 f	0 f	0 e	0 d
	Non-treated									
11	One-three leaf		2 f	7 cd	0 f	0 f	6 f	3 ef	7 de	0 d
	Chateau	3 OZ/A								
12	One-three leaf		12 e	8 cd	0 f	7 f	12 ef	13 def	12 de	0 d
1 -	Chateau	6 OZ/A	0	0 00	0 .		12 0.	10 001	.2 40	0 4
12	One-three leaf		5 ef	3 d	0 f	0 f	0 f	5 ef	0 e	0 d
13	Dual Magnum	1 PT/A	3 61	3 u		0 1	UI	3 61	0 6	o u
4.4	<del>_</del>	1 1 1//	13 de	13 cd	0 f	22 e	11 ef	17 cde	8 de	V 4
14	One-three leaf Chateau	3 OZ/A		13 Ca	0 1	22 e	i i ei	17 cae	o de	0 d
	Dual Magnum	3 OZ/A 1 PT/A								
45		i FI/A	2 (	0 '	2 /	- ·	2 (	0 1		0 /
15	One-three leaf		0 f	0 d	0 f	0 f	0 f	0 f	0 e	0 d
	Non-treated									
	(P=.05)		9.1	17.5		9.0		13.1	15.8	11.0
	ndard Deviation		5.4	10.4	5.8	5.4	7.4	7.9	9.4	6.6
CV			19.7	54.99				32.51	53.78	
	lett's X2		12.447	17.975		11.072		24.21	14.054	8.485
P(Ba	artlett's X2)		0.256	0.055	0.165	0.271	0.051	0.012*	0.171	0.292

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

					<del></del>	
Cro	p Code		AVES	SA AVESA	AVESA	AVESA
Rati	ng Data Type		inju	ry injury	injury	injury
	ing Unit			% %		%
	ng Date		Jan-07-0	8 Jan-21-08	Jan-21-08	May-05-08
	essed By			c sc		SC
	Eval Interval		20 DA-			139 DA-B
Trt	Treatment	Ra				
	Name	Rate Ur		18	19	20
		Nate Of				
1		0.0-	94 a	82 bc	67 d	35 c
	Chateau	3 OZ				
2	PRE		98 a	96 a	90 ab	77 a
	Chateau	6 OZ	/A			
3	PRE		72 b	55 d	20 ef	15 cde
	<b>Dual Magnum</b>	1 PT	/A			
4	PRE		99 a	99 a	99 a	93 a
1 ′	Chateau	3 OZ			1	55 G
	Dual Magnum	1 PT				
	PRE		0 e	0 ~	0 ~	0.0
5			0 6	9 0 g	0 g	0 e
	Non-treated					_
6	Spike		67 b	70 c	72 cd	27 cd
	Chateau	3 OZ	/A			
7	Spike		88 a	90 ab	82 bc	57 b
	Chateau	6 OZ	/A			
8	Spike		30 c	30 ef	27 e	10 de
	Dual Magnum	1 PT				
0	Spike		99 a	99 a	98 a	91 a
9	Chateau	3 OZ		33 a	90 a	31 a
	Dual Magnum	1 PT				
4.0	<del>-</del>	1 F1				
10	Spike		0 e	9 0 g	0 g	0 e
<u> </u>	Non-treated					
11	One-three leaf		10 c	le 20 f	32 e	25 cd
	Chateau	3 OZ	/A			
12	One-three leaf		13 c	33 ef	85 abc	35 c
	Chateau	6 OZ	/A			
13	One-three leaf		2 ε	e 0 g	12 fg	2 e
<b>I</b>	Dual Magnum	1 PT		, y	9	_ ~
11	One-three leaf		28 0	27.0	67 d	18 040
14	Chateau	3 OZ		37 e	67 d	18 cde
<u> </u>	Dual Magnum	1 PT				
15	One-three leaf		0 €	9 0 g	0 g	0 e
_	Non-treated					
LSD	(P=.05)		10.	2 13.2	13.0	19.8
	ndard Deviation		6		7.8	11.9
CV			13.0		15.62	36.72
	lett's X2		17.9			13.511
	artlett's X2)		0.036			0.196
					-	

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

Wheat, Rye, Oats,	and ryegrass response to Chateau and Dual Magnum.									
Trial ID: Wheat4-08 Study Dir.: Stanley Culpepper										
Location: Ponder Farm Investigator: Stanley Culpepper										
GENERAL TRIAL INFORMATION										
Study Director: Stanley Culpepper	Title: Ext. Weed Science									
Affiliation: University of Georgi	a									
Postal Code: 31794										
Investigator: Stanley Culpepper	Title: Ext. Weed Science									
Affiliation: University of Georgi										
Postal Code: 31794	<del></del>									
TRIA	L LOCATION									
City: TyTy	Trial Status: completed									
State/Prov.: GA	Trial Reliability: fair-good									
Postal Code: 31795	Initiation Date: Dec-05-07									
ountry: USA Planned Completion Date:										
	N-Latitude of LL Corner °:									
	: Angle y-axis to North °:									
Directions:										
COOPERA	TOR/LANDOWNER									
Cooperator: Org:	-1									
Address 1:										
Address 2:										
City:										
State/Prov:										
Postal Code:										
Conducted Under GLP (Y/N): N	Conducted Under GEP (Y/N): N									
Guidelines: Guideline D	Description:									
Objective:										
Conclusions:										
CONCIUBIONS.										
CDOD AND W	EED DECONTONION									
CROP AND W	EED DESCRIPTION									

Scientific Name

Crop 1: LOLMU RYEGRASS	, Annual	Variety: Abruzzi
Planting Date: Dec-05-07		
Rate: 15 ft	Depth: 0.5 in	Perennial Age:
Row Spacing: 7.5 in	Spacing Within Row:	Seed Bed: flat
Soil Temperature: 60 F	Soil Moisture: moist	Emergence Date: Dec-10-07
Crop 2: TRZAW wheat		Variety: AGS-2000
Planting Date: Dec-05-07	Planting Meth	od: drilled
Rate: 15 ft	Depth: 0.5 in	Perennial Age:
Row Spacing: 7.5 in	Spacing Within Row:	Seed Bed: flat
Soil Temperature: 60 F	Soil Moisture: moist	Emergence Date: Dec-10-07
Crop 3: SECCE RYE		Variety: Wrends 96
Planting Date: Dec-05-07	Planting Meth	od: drilled
Rate: 15 ft	Depth: 0.5 in	Perennial Age:
Row Spacing: 7.5 in		

Common Name

Weed Code

									•		
Cro	p 4: AVESA	OAT.	COMMON				Va	rietv:	Horizon		
	nting Date:				Planti			_			
Rate	<b>e:</b> 15 f	t	De	epth:	0.5 i	in	Peren	nial <i>I</i>	Age:		
Row	Spacing: 7.	5 in	Spac	ing W	ithin F	Row:	_	_ See	ed Bed: f	lat	
Soi	l Temperatur	<b>e:</b> 60	F Soi	il Moi	sture:	moist		Emerge	ence Date	: Dec-10-07	
					AND DE						
	t Width, Uni			Plo	t Lengt	th, Unit	: 15	FT	Reps:	3	
	e Type: Po lage Type: Co				C+11d1	. Desian	• EXCTO	DTAT			
111.	rage Type: C	Olivelici	IOIIAI		scua	Design	• FACIO	KIAL			
Tria	al Initiation	n Comme	ents:								
	Previous	Crops			P	revious	Pestic	ides		Year	
1.		_									
			l .								
				MA	INTENAN	ICE					
Fie:	ld Prep./Mai	ntenano	e:								
	_										
			Mainter	nance		Form	Form	Form		Rate	
No.	Date		Treatmen	nt Nam	ne .	Conc	Unit	Туре	Rate	Unit	
1.											
		•									
				SOIL	DESCRI	IPTION					
% Sa	and: 92	% OM:	1.3	T	exture:	: Sa	nd				
% S:	<b>ilt:</b> 4	pH:	6.0					ndy lo	oam		
% C	lay: 4	CEC:		F	ert. Le	evel:					
			ADDITI	ONAL	MEASURE	ED ELEM	ENTS				
	Е	lement			Qua	antity	Un	it			
			N	MOISTU	RE CONI	DITIONS					
	Date	Time	Amount	Unit			Type			Interval	Unit
1.											
	•									•	<u> </u>
Ove	rall Moistur	e Condi	tions: n	noist							
	sest Weather							Dista	nce:	Unit:	
			API	PLICAT	ION DES	CRIPTIO	N_				
			A		В	C					
aqA	lication Dat	e:	Dec-05-	07 Dec	:-18-07		07				
	e of Day:	-	11 am		00 pm	5:00 pm					
	_	hod:	broadcas								
	lication Met				aucast	broadca	bL				
App	lication Tim	ung:	A	В		С	_				

		A		В		C
Application Date:	Dec-05-07		Dec-18-07		Dec-	31-07
Time of Day:	11 am		3:00 pm		5:00 pm	
Application Method:	broa	dcast	broadcast		broa	dcast
Application Timing:	A		В		С	
Applic. Placement:	overtop		overtop		over	top
Air Temp., Unit:	60	F	58	f	72	f
% Relative Humidity:	50		47		54	
Wind Velocity, Unit:	3	mph	0	mph	0	mph
Dew Presence (Y/N):	n		n		n	
Water Hardness:						
Soil Temp., Unit:	60	F	55	f	62	f
Soil Moisture:	moist		moist		wet	
% Cloud Cover:	50		100		0	

### CROP STAGE AT EACH APPLICATION

	A	В	С			
Crop 1 Code, Stage:	LOLMU A	LOLMU B	LOLMU C			
Stage Scale:	PRE	spike	1 leaf			
Height, Unit:	0 in	0.25 in	2 inch			
Crop 2 Code, Stage:	TRZAW A	TRZAW B	TRZAW C			
Stage Scale:	PRE	spike	2 leaf			
Height, Unit:	0 in	0.5 in	3.5 inch			
Crop 3 Code, Stage:	SECCE A	SECCE B	SECCE C			
Stage Scale:	PRE	1 leaf	3 leaf			
Height, Unit:	0 in	1 inch	4 inch			
Crop 4 Code, Stage:	AVESA A	AVESA B	AVESA C			
Stage Scale:	PRE	1 leaf	2 leaf			
Height, Unit:	0 in	0.5 in	3.5 in			

### WEED STAGE AT EACH APPLICATION

	A	В	C
Weed 1 Code, Stage:			
Stage Scale:			
Density, Unit:			

### APPLICATION EQUIPMENT

		A		В		С
Appl. Equipment:	backı	pack	backı	pack	back	pack
Operating Pressure:	24		24		24	
Nozzle Type:	flat	fan	flat	fan	flat	fan
Nozzle Size:	11002	2	11002	2	1100	2
Nozzle Spacing, Unit:	18	in	18	in	18	in
Nozzles/Row:	2		2		2	
Band Width, Unit:						
Boom Length, Unit:	4.5	ft	4.5	ft	4.5	ft
Boom Height, Unit:	15	in	15	in	15	in
Ground Speed, Unit:	3	mph	3	mph	3	mph
Incorporation Equip.:						
Hours to Incorp.:						
Incorp. Depth, Unit:						
Carrier:	wate	r	wate	r	wate:	r
Spray Volume, Unit:	14.8	GPA	14.8	GPA	14.8	GPA
Spray pH:		_		_		_
Propellant:	CO2		CO2		CO2	
Tank Mix (Y/N):	Y		Y		Y	

Trt No	Treatment Application Comment