

Montana State University Weed Research

Evaluating Crop Response of 18 Spring Wheat Varieties to Triallate Herbicide
When Planted with a Double Disc Drill Compared to a Hoe Drill.

Trial ID: FARGO VARIETY 2006

Study Dir.: George Newberry

Location: Bozeman, MT

Investigator: Edward S. Davis

GENERAL TRIAL INFORMATION

Study Director: George Newberry

Title: Research & Development

Affiliation: Gowan Company

Investigator: Edward S. Davis

Title: Researcher

Affiliation: Montana State University

Postal Code: 59717

TRIAL LOCATION

City: Bozeman

Trial Status: _____

State/Prov.: MT

Trial Reliability: _____

Postal Code: 59718

Initiation Date: _____

Country: USA

Planned Completion Date: _____

COOPERATOR/LANDOWNER

Cooperator: Arthur Post Research Farm

Country: USA

Org: Montana State University

Phone No: 406 586-6819

Address 1: 8341 Huffine

City: Bozeman

State/Prov: MT

Postal Code: 59718

Objective:

Conclusions:

CROP AND WEED DESCRIPTION

Weed Code Common Name Scientific Name

1. AVEFA Wild oat Avena fatua

Crop 1: TRZAS WHEAT, SPRING

Variety: 18 varieties

Planting Date: 5/8/2006

Planting Method: DRILLED

Rate: 60 LB/A

Depth: 2 IN

Perennial Age: _____

Row Spacing: 10

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 300 FT Reps: 3

Site Type: Dryland Grain Field

Tillage Type: Conventional

Study Design: SPLIT-PLOT

Trial Initiation Comments:

Previous Crops Previous Pesticides Year

1. field pea None 2005

APPLICATION DESCRIPTION

A
Application Date: 5/8/2006
Time of Day: 12:30 P.M.
Application Method: SPRAY
Application Timing: PPLTINC
Applic. Placement: BROSIOI
Air Temp., Unit: 63 F
% Relative Humidity: 28
Wind Velocity, Unit: 5 MPH
Dew Presence (Y/N): N
Soil Temp., Unit: 58 F
Soil Moisture: Dry
% Cloud Cover: 90

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: TRZAS PrePlant

APPLICATION EQUIPMENT

A

Appl. Equipment:	Backpack
Operating Pressure:	40 psi
Nozzle Type:	Flat Fan
Nozzle Size:	8001
Nozzle Spacing, Unit:	18 inch
Band Width, Unit:	_____
Boom Length, Unit:	10 feet
Boom Height, Unit:	18 inch
Ground Speed, Unit:	3 mph
Carrier:	H2O
Spray Volume, Unit:	10 gpa
Propellant:	CO2

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Location: Bozeman, MT

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Crop Code	TRZAS	TRZAS	TRZAS	TRZAS
Part Rated	PLANT	Tiller	Grain	Grain
Rating Data Type	Count	Count	Yield	Test Weight
Rating Unit	Plant/M	Heads/M	Bu/acre	lbs/bushel
Rating Date	6/12/2006	8/7/2006	8/24/2006	8/24/2006
Crop Stage	3-4 leaf	Hard Dou	Mature	Mature
Trt-Eval Interval	35 DA-A	91 DA-A	108 DA-A	108 DA-A

Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Rate	Unit	Appl Code	Appl Description	1	2	4	6				
1	Acavonlea Untreated Disc drill								26	c-x	62	b-v	55.8	B-V	59.55	a-n
2	Acavonlea Untreated Hoe drill								27	c-w	67	b-v	55.1	E-W	59.83	a-l
3	Acavonlea Fargo Disc drill	1	LB A/A	1			QT/A	A	30	a-t	51	g-w	64.5	n-L	60.07	a-i
4	Acavonlea Fargo Hoe drill	1	LB A/A	1			QT/A	A	36	a-i	77	a-v	62.3	s-P	60.11	a-i
5	Acavonlea Fargo Disc drill	2	LB A/A	2			QT/A	A	20	e-B	46	j-w	57.6	y-V	60.16	a-h
6	Acavonlea Fargo Hoe drill	2	LB A/A	2			QT/A	A	44	abc	82	a-t	57.4	y-V	59.93	a-j
7	Acavonlea Fargo GWN-3047 Disc drill	1	LB A/A	1	0.01	LB A/A	0.213	OZ/A	33	a-n	61	b-v	45.9	VWX	59.03	c-u
8	Acavonlea Fargo GWN-3047 Hoe drill	1	LB A/A	1	0.01	LB A/A	0.213	OZ/A	30	a-s	71	a-v	50.5	O-X	59.74	a-m
9	Alzada Untreated Disc drill								31	a-r	47	i-w	52.1	L-X	60.58	a-d
10	Alzada Untreated Hoe drill								26	c-x	52	g-w	49.0	R-X	60.21	a-g
11	Alzada Fargo Disc drill	1	LB A/A	1			QT/A	A	31	a-r	57	d-v	60.9	t-S	61.24	a
12	Alzada Fargo Hoe drill	1	LB A/A	1			QT/A	A	26	c-w	60	c-v	56.4	z-V	60.87	ab
13	Alzada Fargo Disc drill	2	LB A/A	2			QT/A	A	28	a-u	53	e-w	52.6	K-X	60.49	a-e
14	Alzada Fargo Hoe drill	2	LB A/A	2			QT/A	A	22	d-y	52	g-w	55.2	D-V	60.68	abc
15	Alzada Fargo GWN-3047 Disc drill	1	LB A/A	1	0.01	LB A/A	0.213	OZ/A	28	b-u	52	f-w	51.2	N-X	60.11	a-i

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Rating Unit	Plant/M	Heads/M	Bu/acre	lbs/bushel							
Rating Date	6/12/2006	8/7/2006	8/24/2006	8/24/2006							
Crop Stage	3-4 leaf	Hard Dou	Mature	Mature							
Trt-Eval Interval	35 DA-A	91 DA-A	108 DA-A	108 DA-A							
Trt No.	Treatment Name	Rate	Rate Unit	Product Rate	Product Rate Unit	Appl Code	Appl Description	1	2	4	6
48	Ernest Fargo GWN-3047 Hoe drill	1 0.01	LB A/A LB A/A	1 0.213	QT/A OZ/A	A A		32 a-p	86 a-q	64.1 o-M	59.55 a-n
49	Explorer Untreated Disc drill							31 a-r	90 a-o	68.3 f-B	58.09 m-G
50	Explorer Untreated Hoe drill							33 a-n	92 a-m	64.4 n-L	57.76 p-l
51	Explorer Fargo Disc drill	1	LB A/A	1	QT/A	A		16 j-C	62 b-v	53.6 l-X	58.66 f-A
52	Explorer Fargo Hoe drill	1	LB A/A	1	QT/A	A		32 a-p	96 a-k	66.5 l-H	58.66 f-A
53	Explorer Fargo Disc drill	2	LB A/A	2	QT/A	A		9 u-C	48 h-w	41.5 X	58.09 m-G
54	Explorer Fargo Hoe drill	2	LB A/A	2	QT/A	A		27 c-w	75 a-v	47.9 T-X	58.19 k-F
55	Explorer Fargo GWN-3047 Disc drill	1 0.01	LB A/A LB A/A	1 0.213	QT/A OZ/A	A A		14 n-C	62 b-v	56.3 A-V	57.90 n-H
56	Explorer Fargo GWN-3047 Hoe drill	1 0.01	LB A/A LB A/A	1 0.213	QT/A OZ/A	A A		31 a-r	99 a-j	61.7 s-Q	57.90 n-H
57	Gunner Untreated Disc drill							38 a-f	106 a-g	69.3 e-y	56.54 F-N
58	Gunner Untreated Hoe drill							30 a-t	102 a-h	60.6 t-S	55.74 K-O
59	Gunner Fargo Disc drill	1	LB A/A	1	QT/A	A		27 c-w	95 a-k	61.1 t-R	57.29 v-L
60	Gunner Fargo Hoe drill	1	LB A/A	1	QT/A	A		29 a-u	96 a-k	63.3 p-N	56.68 E-N
61	Gunner Fargo Disc drill	2	LB A/A	2	QT/A	A		18 h-C	59 c-v	47.6 T-X	56.96 A-L
62	Gunner Fargo Hoe drill	2	LB A/A	2	QT/A	A		20 e-B	64 b-v	52.1 L-X	56.17 I-O
63	Gunner Fargo GWN-3047 Disc drill	1 0.01	LB A/A LB A/A	1 0.213	QT/A OZ/A	A A		23 d-y	81 a-t	53.3 J-X	57.43 u-K

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Crop Stage	3-4 leaf	Hard Dou	Mature	Mature												
Trt-Eval Interval	35 DA-A	91 DA-A	108 DA-A	108 DA-A												
Trt No.	Treatment Name	Rate	Unit	Product	Product Rate	Product Unit	Appl Code	Appl Description	1	2	4	6				
144	Triple V								32	a-p	80	a-u	74.0	a-s	58.89	d-w
	Fargo	1	LB	A/A	1	QT/A	A									
	GWN-3047	0.01	LB	A/A	0.213	OZ/A	A									
	Hoe drill															
LSD (P=.05)	10.6	30.0	6.88	0.948												
Standard Deviation	6.6	18.5	4.25	0.587												
CV	25.96	25.74	7.03	1.0												
Grand Mean	25.28	72.05	60.54	58.4												
Bartlett's X2	170.805	194.656	123.918	139.295												
P(Bartlett's X2)	0.05	0.002*	0.873	0.382												
Replicate F	11.215	3.990	395.789	56.926												
Replicate Prob(F)	0.0001	0.0206	0.0001	0.0001												
Treatment F	5.996	5.341	35.117	17.901												
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001												

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean separations are based on the complete error term.

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.