

RATINGS OF WHEAT VARIETIES TO THE APHID/BYDV COMPLEX

Susceptible	Moderately susceptible		Intermediate	Moderately resistant/Resistant	
Chisholm	Agseco 7853	Longhorn	2137		
Karl/Karl 92	Betty	Ogallala	2163		
Tam-107	Big Dawg	Oro Blanco	2174	None	None
Tomahawk	Coronado	Tam 200	Custer		
	Heyne	Tonkawa			
	Jagger	Trego			

IMPORTANT POINTS:

- ➔ The aphid/BYDV complex can damage all varieties.
- ➔ There are no wheat varieties immune, highly resistant, or moderately resistant to BYDV.
- ➔ Aphids, BYDV, or both can cause damage to wheat.

APHID CONTROL WITH GAUCHO AT 3 OZ/CWT – 1995-96

Cultivar	Aphids (number/ft of row)					
	15-Dec		12-Mar		22-May	
	Control	3 oz/cwt	Control	3 oz/cwt	Control	3 oz/cwt
2137.....	43 a ¹	0.0 a	118 a	58 a	216 a	115 a
2163.....	44 a	0.0 a	125 a	64 ab	222 a	115 a
Custer.....	46 a	0.0 a	126 a	81 c	230 a	144 b
Jagger.....	46 a	0.0 a	124 a	72 bc	212 a	129 ab
Karl.....	71 b	0.3 a	162 a	72 bc	277 b	123 ab

APHID CONTROL WITH GAUCHO – 1999-00

Gaucho rate (oz/cwt)	Number of aphids per foot of row					
	Chickasha - planted on 09 Sep 99			Stillwater - planted on 17 Sep 99		
	29-Oct-99	18-Nov-99	22-Feb-00	28-Oct-99	30-Nov-99	16-Feb-00
0.0.....	17.9	~ 0	52.4	~ 0	27.0	17.0
0.5.....	11.2	~ 0	28.7	~ 0	12.3	13.4
1.0.....	7.9	~ 0	21.3	~ 0	8.0	6.3
1.5.....	1.1	~ 0	19.6	~ 0	5.6	5.4
2.0.....	0.4	~ 0	4.6	~ 0	2.5	2.0
3.0.....	0.1	~ 0	0.7	~ 0	0.4	0.4

IMPORTANT POINTS:

- ➔ Treating wheat seed with Gaucho consistently results in significantly lower aphid infestations in the fall, which continues to be reflected the following spring.
- ➔ Treatment provides protection from aphid infestations for approximately 70 days after planting.
- ➔ Best potential application of Gaucho is for early-planted wheat intended for grazing.
- ➔ Be aware of the 45-day waiting period after planting before grazing can be started.

EFFECT OF GAUCHO TREATMENT AT 3 OZ/CWT ON BYDV INCIDENCE, PLANT HEIGHT, YIELD AND THOUSAND KERNEL WEIGHT – 1995-96

	BYD incidence	Plant height (cm)	Yield (bu/A)	TKW ² (gm)
Gaucha 480F 3 oz/cwt.....	23.1 a ¹	66.4 a	77.0 a	25.2 a
Control (no Gaucha).....	50.8 b	59.1 b	64.4 b	24.8 a

¹Means followed by the same letter within a column are not significantly different (LSD, $\alpha=0.05$).

²TKW=thousand kernel weight.

EFFECT OF GAUCHO ON BYDV INCIDENCE AND SEVERITY – 1999-00

<u>Gaucha Rate</u> (oz/cwt)	<u>Chickasha - 26 April</u>		<u>Stillwater - 21 April</u>	
	Incidence	Severity	Incidence	Severity
0.0	60.0	8.7	46.3	9.1
0.5	58.3	7.5	48.3	11.2
1.0	63.8	6.8	43.3	8.4
1.5	53.3	7.9	44.2	7.8
2.0	55.4	6.6	49.2	4.5
3.0	58.3	6.3	53.3	9.4

EFFECT OF GAUCHO TREATMENT ON YIELD, TEST WEIGHT (TW) AND THOUSAND KERNEL WEIGHT (TKW) – 1999-00

<u>Gaucha Rate</u> (oz/cwt)	<u>Chickasha - 26 April</u>			<u>Stillwater - 21 April</u>		
	Yield (bu/A)	TW (lb/bu)	TKW (gm)	Yield (bu/A)	TW (lb/bu)	TKW (gm)
0.0	27.2	52.4	23.0	40.4	60.4	30.1
0.5	25.5	51.9	22.6	39.9	60.3	30.1
1.0	27.5	53.0	23.5	42.7	60.2	29.9
1.5	26.8	52.6	23.3	42.5	60.0	30.0
2.0	27.0	52.9	23.2	40.4	59.9	28.9
3.0	27.6	52.9	23.2	38.8	60.0	28.9

COST-BENEFIT EVALUATION:

♦Gaucha (formulated with Raxil) costs \$1,000.00 per gallon, which equals \$7.81 per ounce. Thus:

⇒At 1 oz/cwt =s \$4.69/60 lb or \$7.04/90 lb

⇒At 2 oz/cwt =s \$9.38/60 lb or \$14.08/90 lb

⇒At 3 oz/cwt =s \$14.08/60 lb or \$21.12/90 lb

So, at \$2.50/bu wheat, you need yield increase of:

⇒2-3 bu/acre as a break even for the 1 oz/cwt rate

⇒4-6 bu/acre as a break even for the 2 oz/cwt rate

⇒6-9 bu/acre as a break even for the 3 oz/cwt rate