

## **Efficacy of Several Compounds on Gummy Stem Blight in Cantaloupe, Spring 2003**

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In this experiment, we investigated the effect of Syngenta products (Bravo Ultrex and Quadris), Grower standard products (Equus DF) and Heads Up on gummy stem blight severity. The effect of gummy stem blight was assessed from April to May.

These experiments were conducted at a research farm in Quincy, FL (University of Florida, NFREC) to evaluate the efficacy of several compounds for control of gummy stem blight (caused by the fungus *Didymella bryoniae*) on susceptible cantaloupe cultivar "Athene."

### **Materials and Methods**

Treatments were replicated four times with 90 plants per plot (3 rows) in randomized complete block design (RCBD). Natural inoculum was the source of infections. Five-week-old seedlings were transplanted March 25 on to raised beds previously broadcast with methyl bromide (67%) + chloropicrin (33%) and covered with black polyethylene (mulch), drip-irrigated and fertilized (195-60-195 lb/A N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O). Application of products began with a pre-transplant foliar spray of Heads Up on March 21 and ended on June 3. Timing of product application is noted in Table 1. Disease severity of gummy stem blight was assessed 3 times for percent incidence of stem infections and 3 times for percent severity of foliage infection. Fruit were harvested June 2, 5, 9, 12, 16 and 19, 2003.

### **Results**

Gummy stem blight incidence of the stems is shown in Table 1. Gummy stem blight severity of the foliage is shown in Table 2. Yield data is shown in Table 3.

Table 1. Efficacy of the products on gummy stem blight (assessment of stems).

Treatments	% Disease Incidence Spring 2003 <sup>z</sup>		
	April 23	May 2	May 13
UTC <sup>y</sup>	12.7 a	20.6 a	24.2 a
Syngenta Products <sup>x</sup>	12.2 a	13.9 a	14.5 b
Grower Standard <sup>w</sup>	3.9 b	4.8 b	5.38 c
Heads Up + Syngenta Products <sup>v</sup>	5.2 b	6.7 b	7.3 bc

<sup>z</sup> Means with the same letter are not significantly different (P=0.05) by Duncan's multiple range test (SAS).

<sup>y</sup> UTC= Untreated Control

<sup>x</sup> Syngenta Products= Bravo Ultrex + Quadris applied every 14 days, foliar application.

<sup>w</sup> Grower Standard= Equus DF applied every 14 days, foliar application.

<sup>v</sup> Heads Up (1g/L) applied 6 times, as foliar application 3 days before transplanting, root dip day of transplanting, foliar application 5 days after transplanting, and 3 foliar applications in 14-day intervals following 5<sup>th</sup>-day-after-transplanting application.

Table 2. Efficacy of the products on gummy stem blight (assessment of foliage).

Treatments	% Disease Severity Spring 2003 <sup>z</sup>		
	May 13	May 23	June 2
UTC <sup>y</sup>	1.5a	11.1a	14.7a
Syngenta Products <sup>x</sup>	0b	2.1b	5.9b
Grower Standard <sup>w</sup>	0b	1.46b	7.3b
Heads Up + Syngenta Products <sup>v</sup>	0b	2.1b	5.0b

<sup>z</sup> Means with the same letter are not significantly different (P=0.05) by Duncan's multiple range test (SAS).

<sup>y</sup> UTC= Untreated Control

<sup>x</sup> Syngenta Products= Bravo Ultrex + Quadris applied every 14 days, foliar application.

<sup>w</sup> Grower Standard= Equus DF applied every 14 days, foliar application.

<sup>v</sup> Heads Up (1g/L) applied 6 times, as foliar application 3 days before transplanting, root dip day of transplanting, foliar application 5 days after transplanting, and 3 foliar applications in 14-day intervals following 5<sup>th</sup>-day-after-transplanting application.

Table 3. Yield Per Day Harvested and Total Yield.

Treatment	Yield <sup>z</sup> (cwt/A) <sup>y</sup>						
	June 2	June 5	June 9	June 12	June 16	June 19	Total
UTC <sup>x</sup>	16.7a	73.8c	107.4b	46.5a	61.5a	78.7a	384.6b
Syngenta Products <sup>w</sup>	11.3a	100.2b	160.4a	47.9a	35.2b	97.0a	452.0a
Grower Standard <sup>v</sup>	4.9a	125.2a	181.0a	33.4ab	30.1b	73.7a	448.0a
Heads Up <sup>u</sup> +Syngenta Products	15.0a	119.6a	157.1a	27.9b	44.1ab	83.5a	447.2a

<sup>z</sup> Means with the same letter are not significantly different (P=0.05) by Duncan's multiple range test (SAS).

<sup>y</sup> Formula used to obtain yield data: (plot weight)(0.484)=cwt/A

<sup>x</sup> UTC= Untreated Control

<sup>w</sup> Syngenta Products= Bravo Ultrex + Quadris) applied every 14 days, foliar application.

<sup>v</sup> Grower Standard= Equus DF (1.8 lb/A) applied every 14 days, foliar application.

<sup>u</sup> Heads Up (1g/L) applied 6 times, as foliar application 3 days before transplanting, root dip day of transplanting, foliar application 5 days after transplanting, and 3 foliar applications in 14-day intervals following 5<sup>th</sup>-day-after-transplanting application.