

Ralstonia solanacearum race 3 biovar 2 Losses in North Carolina

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On July 1, 2003, the North Carolina Farm Bureau hosted a *Ralstonia solanacearum* race 3 biovar 2 meeting. The meeting was attended by over 40 individuals including growers from South Carolina and Virginia. In addition, Lin Schmale of the Society of American Florists and Steve Carver of OFA attended. We would like to express our thanks to the North Carolina Farm Bureau for setting up this meeting.

In total, 127 firms in 27 states had confirmed cases according to the USDA. North Carolina tied Michigan with the highest number (13). Other states in the South with a large number of confirmed cases were Virginia (10), Alabama (9), and South Carolina (8).

North Carolina experienced a total estimated loss of \$266,934.60 (Table 1). This is smaller than the estimate for Virginia (>\$300,000) and for a single grower in Indiana (>\$750,000). The average loss per NC grower was

\$20,533.43. At the time of going to press, the majority of growers experiencing losses had not been compensated.

During the July meeting, Mr. Gene Cross of NCDA&CS stated that geranium crops will be monitored in 2004 for *Ralstonia solanacearum* race 3 biovar 2. If a positive sample is confirmed, the USDA Action Plan will be followed for destroying the crop and containment of the disease. A copy of the Action Plan can be obtained from <http://www.aphis.usda.gov/ppq/ep/ralstonia/index.html>

Ralstonia solanacearum race 3 biovar 2 is a serious disease that can cause major losses to the potatoes, tomatoes, and eggplants. Growers will need to monitor their crops for disease problems and have the plant diagnosed if wilting is observed. Removal of plants and placing it in double poly garbage bags as outlined in the USDA Action Plan is important to stop the spread of the disease.

Table 1. Cost of *Ralstonia solanacearum* race 3 biovar 2 related losses in North Carolina, 2003.

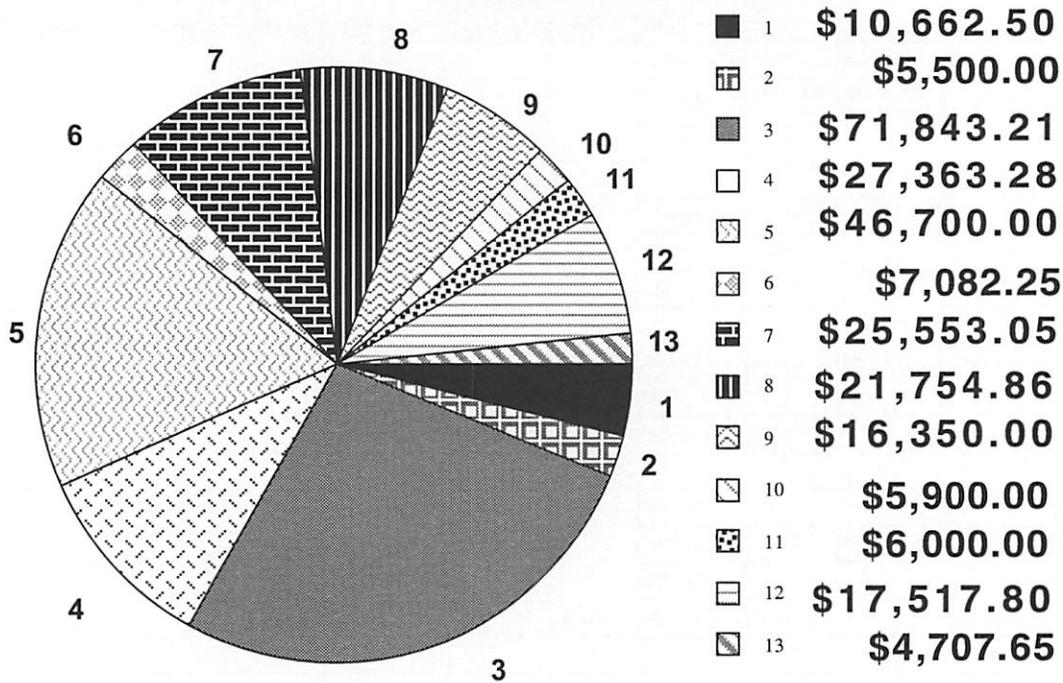
Data collected at the request of USDA-APHIS. Based on a +RS diagnosis at the NCSU Plant Disease Clinic and USDA-APHIS for the 13 infected NC firms. Unit value numbers vary among firms because of the market segment they sell to and plant quality.

Firm	Item	Number	Unit Value	Total Value	Disposal Costs			Time and Temp Model	Bench Construction	GRAND TOTAL
					Labor	Chemical + Bags	Landfill			
1	Geraniums 6.5 inch	2250	\$3.95	\$8,887.50						
	Geraniums 10 inch	100	\$7.75	\$775.00						
	Total			\$9,662.50						
2	Geraniums 6 inch	1000	\$5.00	\$5,000.00	\$200.00	\$50.00	\$250.00	\$-	\$-	\$5,500.00
3	Geraniums 10 inch	2259	\$8.00	\$18,072.00						
	Geraniums 14 inch	128	\$10.00	\$1,280.00						
	Geraniums 6.5 inch	5024	\$4.25	\$21,352.00						
	Misc Plants			\$6,951.00						
	Total			\$47,655.00						
4	Geraniums 7.5 inch	2750	\$6.50	\$17,875.00						
	Geraniums 12 inch	500	\$15.00	\$7,500.00						
	Total			\$25,375.00						

Table 1. Continued

Firm	Item	Number	Unit Value	Total Value	Disposal Costs			Time and Temp Model	Bench Construction	GRAND TOTAL
					Labor	Chemical + Bags	Landfill			
5	Geraniums	2500	\$7.00	\$17,500.00						
	Misc Plants	(These plants could not be grown due to the quarantine)		\$25,000.00						
	Total				\$42,500.00	\$500.00	\$200.00	\$300.00	\$200.00	\$3,000.00
6	Geraniums	333	\$16.95	\$5,644.35						
	Misc Plants			\$710.40						
	Total				\$6,354.75	\$497.50	\$125.00	\$105.00	\$-	\$-
7	Geraniums 6.5 inch	4050	\$3.25	\$13,162.50						
	Geraniums 10 inch	1080	\$6.25	\$6,750.00						
	Total				\$19,912.50	\$4,828.65	\$606.00	\$205.90	\$-	\$-
8	Geraniums 6.5 inch	1915	\$4.00	\$7,660.00						
	Geraniums 10 inch	260	\$10.00	\$2,600.00						
	Misc Plants			\$9,041.50						
	Total				\$19,301.50	\$500.00	\$-	\$453.36	\$1,500.00	\$-
9	Geraniums			\$12,000.00						
	Misc Plants			\$2,100.00						
	Total				\$14,100.00	\$250.00	\$250.00	\$150.00	\$1,600.00	\$-
10	Geraniums	480	\$4.00	\$1,920.00						
	Misc Plants			\$3,380.00						
	Total				\$5,300.00	\$250.00	\$200.00	\$150.00	\$-	\$-
11	Geraniums	1000	\$3.00	\$3,000.00						
	Misc Plants			\$2,450.00						
	Total				\$5,450.00	\$-	\$200.00	\$-	\$350.00	\$-
12	Geraniums			\$13,232.80						
	Misc Plants			\$3,787.00						
	Total				\$17,019.80	\$249.00	\$124.50	\$124.50	\$-	\$-
13	Geraniums			\$3,632.30						
	Misc Plants			\$228.17						
	Total				\$3,860.47	\$510.00	\$41.90	\$197.50	\$97.78	\$-
GRAND TOTAL									\$266,934.60	
Losses do not include the cost of lost sales during the quarantine period, losses due to having an incomplete product mix, or interest charges for cash flowing the losses. Numbers in italics are estimates.										
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► Losses from *Ralstonia solanacearum* race 3 biovar 2 ranged from a high \$71,843.21 to a low of \$4,707.65. The average loss was \$20,533.43.



The majority of the losses were due to the destruction of geraniums (62.9%), followed by destruction of the commingled plants (20.1%), required installation of benching to avoid future contamination from ground production (8.6%), clean up costs (6.6%), and extra costs incurred while running the time and temperature model (1.8%).

