

**POTATO** (*Solanum tuberosum*)  
**Early Blight;** *Alternaria solani*  
**Late Blight;** *Phytophthora infestans*

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**EVALUATION OF FUNGICIDES TO CONTROL EARLY BLIGHT AND LATE BLIGHT OF POTATO - HANCOCK, 1999:** A field trial to evaluate selected fungicides for control of early blight and late blight was established April 28-29, 1999 at the Hancock Agricultural Research Station, Hancock, WI. US#1 Russet Burbank tubers were mechanically cut into approximately 2 oz. seedpieces April 23 and allowed to heal until planting. A randomized complete block design with four replications was used for the experiment, with each plot consisting of four 24-foot-long rows spaced 36 inches apart with tubers 14 inches apart in the row. To avoid soil compaction in treatment rows, drive rows for pesticide application equipment were included in the design adjacent to plots. The soil type was Plainfield loamy sand, pH 6.1. Fertilizer applied was: 0-0-60, 250 lb/A, broadcast April 6, before planting, 5-10-30, 500 lb/A, banded in the row at planting, sidedress applications on May 18 (21-0-0, 350 lb/A) and June 3 (34-0-0, 375 lb/A) and broadcast application June 3 of Cal-Sul, 400 lb/A. An additional 40 lb/A nitrogen was applied through the irrigation water July 22, following a heavy rain. Insects were controlled with Admire (16 oz./A) incorporated in the fertilizer at planting and foliar application of Dimethoate 400 (1 pt/A, June 25), Monitor 4 (1 qt/A, July 2), Baythroid 2 (2.8 fl oz./A, July 7), Asana XL (9.6 fl oz./A) + Prentox PBO-8 (2 oz./A), August 6, and Provado 1.6 F (4 oz./A, August 20). Linex 4 L (1.0 pt/A) was applied May 11 for weed control.

Fungicide treatments were applied to all four rows of each plot at weekly intervals from June 30 to August 25, according to treatment protocol, for a total of 9 weeks. Treatments were applied with a plot sprayer consisting of a tractor-mounted boom pressurized with an air compressor. The majority of treatments were applied at a rate equivalent to 35 gal water/A at 65 psi, using Tee Jet Hollow Disc Cone D3-23 nozzles (15 nozzles at 8-inch spacing). The trial also included four additional types of nozzles: Extended Range Flat Fan XR110 03, Lurmark Venturi, TwinJet TJ60-11003VS, Air induction AI11003VS. Treatments with these nozzles were applied at a rate equivalent to 31 gal water/A at 40 psi (8 nozzles at 16-inch spacing). Ridomil Gold 4EC was applied to designated plots with the plot sprayer using 40 gal water/A at the rate of 0.4 oz. (product)/1000 row feet immediately prior to first hilling.

Plots were not inoculated but relied on natural dispersal of both *Phytophthora infestans* and *Alternaria solani* for disease establishment. Disease severity was rated weekly from June 25 through September 7 using the Horsfall-Barratt rating scale. Vines were killed with application of Diquat (1.0 pt/A) plus Peptoil (1.0 qt/A) on September 8 and 15. The two center rows of each plot (a total of 48 feet of row) were machine harvested and graded September 20-23. Tubers were graded into US#1, undersize, and cull categories and all potatoes in the US#1 category from each treatment plot were sorted using an optical size grader into six categories: < 4 oz., 4-6 oz., 6-10 oz., 10-13 oz., 13-16 oz. and >16 oz. Specific gravity was determined for a tuber sample from each plot and 25-40 pound samples from selected treatments were placed in storage. These will be evaluated for tuber decay, silver scurf and black scurf after about five months in storage. Rainfall measured during the growing season (inches) was 3.3 - May; 3.7 - June; 10.7 - July; 4.5 - August and 0.5 - September (through the 20<sup>th</sup>). An additional 10.9 inches of water was applied as overhead sprinkler irrigation in 24 applications (May 6 - September 17).

Early blight was first observed in this trial on June 25. Early blight progressed slowly through the first week of August and more rapidly thereafter so that by August 23, over 60% of the foliage in untreated control plots exhibited symptoms. Several treatments provided excellent control of early blight with 50% or less of the foliage exhibiting symptoms on the final evaluation, September 7. Fungicide application also significantly reduced the area under the disease progress curve (AUDPC) for early blight. While we observed an AUDPC of 0.29 in the untreated control plots, the early blight AUDPC was 0.10 or less in 21 of 64 treatment plots. The most successful treatments included BAS 500, Folicur, or Quadris mixed with or alternated with other fungicides as part of a season-long program. The more successful early blight programs included weekly sprays of Folicur 3.6 FL + Curzate 60DF + Induce; Quadris SC alternated with Bravo WS, Zn or Ultrex; DPX-JE874 50WG mixed with Manzate 200 75DF; Quadris SC alternated with RH-141457 75DF; Quadris SC alternated with Dithane DF Rainshield NT; BAS 500F alone; BAS 500F alternated with Bravo WS; Quadris SC alternated with Manzate 75DF or Manzate 75DF + Super Tin 80WP; Quadris SC alternated with Penncozeb 75DF; Quadris SC alternated with Bravo WS or Polyram 80DF; Quadris SC alternated with Bravo WS or Polyram 80DF + Super Tin 80W; and Quadris SC alternated with Bravo

WS or Polyram 80DF + Curzate 60DF; and the program including Bravo, Quadris and the higher rate of Acrobat. Similar early blight control was observed in plots receiving 3 (weeks 1,3,5 or 2,4,6), 4 (weeks 3,5,7,9) or 5 (weeks 1,3,5,7,9) applications of Quadris SC alternated with Bravo WS or Zn, while somewhat more early blight was observed in plots treated twice with Quadris SC (weeks 7 and 9) and seven times with Bravo WS on weeks 1-6 and 8. The weekly addition of Auxigro (0.06 lb/A) to Dithane DF Rainshield NT significantly improved early blight control and yield of US#1 tubers when compared with Dithane DF Rainshield NT alone. Similar results were not observed with higher rates of Auxigro. Late blight did not appear until August 23 and most treatments provided excellent control. In the untreated control plots, heavy early blight pressure and loss of foliage precluded the accurate assessment of late blight severity. The low level of late blight infection on the untreated control plots is related to the lack of control of early blight in these plots. Weekly application of Folicur + Curzate, while providing excellent control of early blight, did not control late blight. The AUDPC representing the combined effects of early and late blight ranged from 0.045 to 0.294. Weekly application of Bravo Zn with five different types of spray nozzles did not significantly affect disease control or yield. Significant differences were observed between treatments in total yield and yield of US#1A, undersize, cull and size grades of  $\leq 13$  oz. Many treatments contributed to total yields significantly higher than the untreated control yields of 459 cwt/A. Those treatments with the best early blight control generally had the highest total and US#1A yield, fewest US#1A tubers in the  $< 4$  oz. category and the greatest proportion of tubers in the 6-13 oz. category. Specific gravity measurements ranged from 1.074 (untreated control) to 1.084 (Quadris SC alternated with Penncozeb 75DF). The effect of fungicide treatment on fresh market crop value ranged from minus (-) \$403.64 to plus (+) \$868.79 per acre. The effect of fungicide treatment on processing crop value ranged from minus (-) \$298.59 to plus (+) \$460.91 per acre. The cost of applied fungicides was not available for experimental materials, but a few of the experimental materials had relatively high gross yield values and depending on the eventual pricing for these materials, these may have promise for use by commercial growers.

**Table 1. Effect of treatment on early blight and late blight severity (percent foliage infection).**

Trt #	Treatment	Rate/Acre		Schedule Summary	Percent Foliage Infection <sup>1</sup>																		
		Formulated Product	Active Ingredient		Early Blight Alone										Late Blight Alone			Combined					
					6/25	7/6	7/13	7/20	7/26	8/2	8/9	8/16	8/23	8/31	9/7	8/23	8/31	9/7	8/23	8/31	9/7		
Application dates: 1=6/30, 2=7/7, 3=7/14, 4=7/21, 5=7/28, 6=8/4, 7=8/11, 8=8/18, 9=8/25																							
1	Untreated Control				0.7	1.8	3.2	4.1	6.4	17.0	25.8	43.2	60.9	85.3	95.2	0.0	1.5	2.3	60.9	88.4	98.2		
2	Folicur 3.6 F + Curzate 60 DF + Induce	0.25 pt 0.21 lb 0.06%	1.8 oz. 2.0 oz.	9 Appl (wks 1-9)	1.2	2.0	2.6	3.7	3.8	7.3	9.1	24.4	29.7	25.0	58.1	0.0	13.6	37.1	29.7	56.3	90.0		
3	Folicur 3.6 F + Curzate 60 DF + Induce	0.31 pt 0.21 lb 0.06%	2.25 oz. 2.0 oz.	9 Appl (wks 1-9)	1.2	1.8	2.8	3.2	3.9	5.9	8.2	23.2	26.6	22.3	42.6	0.3	17.4	46.5	26.9	49.6	85.5		
4	Folicur 3.6 F + Curzate 60 DF + Induce	0.38 pt 0.21 lb 0.06%	2.7 oz. 2.0 oz.	9 Appl (wks 1-9)	0.1	1.0	2.5	2.5	3.5	5.0	5.6	8.9	16.1	21.3	35.5	0.0	11.1	40.5	16.1	37.5	83.0		
5	Agri Tin + Dithane DF Rainshield NT Champ 2 + Bravo Zn 4.17 F	0.188 lb 2.0 lb 2.0 pt 1.5 pt	0.15 lb 1.5 lb 1.15 lb 0.78 lb	4 Appl (wks 2,4,6,8) 5 Appl (wks 1,3,5,7,9)	1.0	2.0	2.3	3.1	3.7	4.1	7.8	12.0	22.7	43.0	68.2	0.0	0.0	0.0	22.7	43.0	68.2		
6	Ultra Champ + Bravo Zn 4.17 F	1.33 lb 1.25 pt	0.77 lb 0.65 lb	9 Appl (wks 1-9)	1.0	1.8	3.5	3.4	5.9	8.8	21.1	40.2	49.2	71.3	90.3	0.0	0.3	0.6	49.2	71.3	91.5		
7	Bravo WS (6F) + Acrobat 50 WP Quadris 2.08 SC + Acrobat 50 WP Quadris 2.08 SC + Acrobat 50 WP	1.0 pt 0.4 lb 0.38 pt 0.4 lb 0.38 pt 0.4 lb	0.75 lb 0.2 lb 0.1 lb 0.2 lb 0.1 lb 0.2 lb	4 Appl (wks 2,4,6,8) 2 Appl (wks 6,8) 4 Appl (wks 1,3,5,7) 3 Appl (wks 1,5,7) 1 Appl (wk 9)	1.0	1.2	1.8	2.3	2.8	3.4	3.2	5.7	7.0	11.1	35.5	0.0	0.0	0.0	7.0	11.1	35.5		
8	Bravo WS (6F) + Acrobat 50 WP Quadris 2.08 SC + Acrobat 50 WP Quadris 2.08 SC + Acrobat 50 WP	1.0 pt 0.3 lb 0.38 pt 0.3 lb 0.38 pt 0.3 lb	0.75 lb 0.15 lb 0.1 lb 0.15 lb 0.1 lb 0.15 lb	4 Appl (wks 2,4,6,8) 2 Appl (wks 6,8) 4 Appl (wks 1,3,5,7) 3 Appl (wks 1,5,7) 1 Appl (wk 9)	1.5	1.9	2.0	2.2	2.6	3.5	3.7	4.8	5.3	13.5	29.3	0.0	0.0	0.0	5.3	13.5	29.3		
9	Bravo Zn 4.17 F	2.125 pt	1.11 lb	9 Appl (wks 1-9)	1.2	1.6	2.5	2.8	5.0	6.6	11.4	26.8	38.1	69.5	83.3	0.0	0.0	0.3	38.1	69.5	84.5		
10	Bravo Zn 4.17 F Quadris 2.08 SC	2.125 pt 0.38 pt	1.11 lb 0.1 lb	6 Appl (wks 2,4,6,7,8,9) 3 Appl (wks 1,3,5)	1.5	1.5	2.2	2.3	2.9	3.4	3.9	4.5	6.1	16.5	37.1	0.0	0.0	0.0	6.1	16.5	37.1		
11	Bravo Zn 4.17 F Quadris 2.08 SC	2.125 pt 0.38 pt	1.11 lb 0.1 lb	6 Appl (wks 1,3,5,7,8,9) 3 Appl (wks 2,4,6)	1.2	1.2	2.2	2.2	2.2	2.9	3.8	4.4	5.4	12.3	40.4	0.0	0.0	0.0	5.4	12.3	40.4		
12	Bravo Ultrex Fluazinam 500 F Quadris 2.08 SC	1.4 lb 0.5 pt 0.38 pt	1.13 lb 0.26 lb 0.1 lb	5 Appl (wks 3,6,7,8,9) 2 Appl (wks 2,5) 2 Appl (wks 1,4)	1.6	1.2	2.3	2.2	2.3	2.5	3.2	5.1	5.4	12.9	35.7	0.0	0.1	0.1	5.4	12.9	37.3		
13	Bravo WS (6F)	1.5 pt	1.125 lb	9 Appl (wks 1-9)	0.9	1.5	2.6	2.8	4.8	8.2	15.8	31.8	55.9	81.8	95.5	0.0	0.0	0.0	55.9	81.8	95.5		









**Table 2. Effect of fungicide treatment on relative area under the disease progress curve, yield, proportion of US#1, undersize and cull potatoes, specific gravity and size grades of US#1 potatoes (Treatment numbers correspond to treatments listed in Table 1).**

Trt no.	Relative AUDPC <sup>1</sup>			Yield								Specific Gravity	Size Grades of US # 1 Potatoes - %						
	Early Blight	Late Blight	Com-bined	TOTAL cwt/A	US#1		Undersize <sup>2</sup>		Culls		< 4 oz.		4-6 oz.	6-10 oz.	10-13 oz.	6-13 oz.	13-16 oz.	> 16 oz.	
					cwt/A	%	cwt/A	%	cwt/A	%									
1	0.289	0.003	0.294	458.9	300.8	65.5	31.8	7.0	126.4	27.5	1.074	34.1	35.7	24.1	5.0	29.1	0.7	0.5	
2	0.134	0.031	0.181	565.8	367.5	65.0	41.8	7.4	156.5	27.5	1.080	27.2	35.3	28.6	6.9	35.5	1.1	0.8	
3	0.117	0.040	0.165	598.1	356.2	59.6	33.6	5.6	208.3	34.7	1.079	28.2	32.6	28.5	7.0	35.6	2.1	1.7	
4	0.082	0.030	0.121	575.7	362.9	63.2	41.0	7.2	171.8	29.6	1.081	24.7	30.1	34.9	6.9	41.8	2.9	0.5	
5	0.133	0.000	0.133	543.4	311.4	57.3	36.3	6.8	195.8	36.0	1.079	29.6	32.7	31.1	4.4	35.6	1.8	0.3	
6	0.245	0.001	0.246	502.4	298.3	59.5	40.7	8.2	163.4	32.3	1.076	32.7	33.7	29.4	3.2	32.6	0.5	0.6	
7	0.055	0.000	0.055	563.8	316.1	56.2	41.9	7.5	205.8	36.3	1.081	29.9	29.7	27.8	8.2	36.1	3.2	1.2	
8	0.054	0.000	0.054	579.0	337.6	58.4	39.8	6.8	201.6	34.8	1.082	34.4	28.4	28.9	6.7	35.6	0.8	0.7	
9	0.203	0.000	0.203	521.6	279.2	53.4	49.0	9.4	193.4	37.3	1.079	31.7	29.7	29.5	6.7	36.1	2.0	0.5	
10	0.061	0.000	0.061	584.2	307.1	52.3	40.4	7.0	236.7	40.7	1.081	26.6	29.9	28.8	9.7	38.5	3.7	1.3	
11	0.056	0.000	0.056	595.3	383.6	64.4	40.9	6.9	170.8	28.8	1.083	26.8	30.3	29.6	9.1	38.7	2.6	1.5	
12	0.055	0.000	0.055	579.6	292.4	50.4	51.5	9.0	235.6	40.6	1.082	35.0	29.1	23.4	9.7	33.1	1.1	1.8	
13	0.249	0.000	0.249	498.5	282.5	56.3	47.5	9.6	168.5	34.1	1.077	35.4	33.2	26.1	3.6	29.7	1.4	0.3	
14	0.073	0.000	0.073	561.6	328.2	58.4	42.0	7.5	191.4	34.1	1.081	29.9	33.4	27.2	7.2	34.5	1.4	0.9	
15	0.082	0.000	0.083	549.9	334.0	60.6	41.0	7.5	175.0	31.9	1.081	28.3	30.9	30.1	7.0	37.1	2.7	1.0	
16	0.125	0.001	0.127	516.0	298.3	57.5	47.6	9.3	170.1	33.2	1.079	31.6	35.1	26.2	5.4	31.6	1.4	0.3	
17	0.245	0.000	0.245	468.0	278.4	59.1	37.8	8.2	151.7	32.7	1.074	35.3	33.8	23.6	4.6	28.2	1.9	0.8	
18	0.223	0.000	0.223	502.5	264.7	52.5	40.5	8.2	197.3	39.3	1.076	39.8	31.7	24.4	3.8	28.2	0.3	0.0	
19	0.241	0.000	0.241	472.1	280.2	59.0	39.7	8.5	152.2	32.5	1.075	36.4	33.1	24.0	4.8	28.8	1.0	0.7	
20	0.122	0.000	0.122	556.7	284.8	51.1	40.4	7.2	231.5	41.7	1.080	31.3	33.7	27.5	5.6	33.1	1.1	0.8	
21	0.103	0.000	0.104	583.9	344.0	58.9	40.3	6.9	199.5	34.1	1.079	30.5	29.8	28.2	8.5	36.7	2.6	0.4	
22	0.129	0.000	0.129	569.9	325.6	57.1	45.5	8.0	198.8	34.9	1.079	30.6	31.5	29.5	7.8	37.3	0.0	0.5	
23	0.124	0.000	0.124	559.9	365.8	64.9	42.9	7.7	151.2	27.4	1.080	27.4	29.6	33.2	7.5	40.7	1.5	0.8	
24	0.111	0.000	0.111	564.6	312.2	55.5	38.5	6.8	213.9	37.7	1.081	33.2	31.8	30.0	4.0	34.1	0.7	0.3	
25	0.069	0.000	0.069	550.7	283.6	51.6	41.6	7.5	225.5	40.8	1.080	33.4	28.2	24.6	9.4	34.0	2.6	1.7	
26	0.105	0.000	0.106	547.3	316.0	57.4	45.0	8.2	186.3	34.4	1.081	30.9	29.4	30.6	5.6	36.2	2.5	1.0	
27	0.141	0.000	0.141	533.0	256.0	47.9	58.6	11.0	218.4	41.0	1.078	37.2	28.4	26.2	7.0	33.2	1.2	0.0	
28	0.065	0.000	0.065	588.5	324.1	55.1	41.6	7.1	222.8	37.9	1.083	34.7	32.1	26.9	5.2	32.0	0.8	0.4	
29	0.188	0.000	0.188	534.6	299.0	55.7	43.9	8.3	191.7	35.9	1.078	29.6	34.1	29.1	5.2	34.3	1.7	0.4	
30	0.184	0.000	0.184	490.1	270.3	55.2	41.2	8.4	178.6	36.4	1.076	34.2	31.5	26.6	4.9	31.5	0.8	2.0	
31	0.057	0.000	0.057	580.6	335.7	57.5	37.6	6.7	207.3	35.8	1.079	27.0	28.8	32.2	8.5	40.7	2.1	1.4	
32	0.125	0.000	0.126	539.7	303.0	55.6	43.5	8.2	193.2	36.3	1.079	31.7	29.9	28.7	5.9	34.6	2.3	1.4	
33	0.055	0.001	0.057	549.6	316.9	57.5	40.2	7.3	192.6	35.2	1.081	25.7	27.9	32.9	9.6	42.5	2.1	1.8	

Trt no.	Relative AUDPC <sup>1</sup>			Yield								Specific Gravity	Size Grades of US # 1 Potatoes - %						
	Early Blight	Late Blight	Com-bined	TOTAL cwt/A	US#1		Undersize <sup>2</sup>		Culls		< 4 oz.		4-6 oz.	6-10 oz.	10-13 oz.	6-13 oz.	13-16 oz.	> 16 oz.	
					cwt/A	%	cwt/A	%	cwt/A	%									
34	0.154	0.000	0.154	537.6	295.2	55.2	43.6	8.1	198.7	36.6	1.078	29.6	29.2	30.4	7.2	37.5	2.9	0.7	
35	0.221	0.000	0.221	495.1	309.8	61.9	41.4	8.5	143.9	29.6	1.078	31.6	35.0	25.5	4.8	30.3	1.2	1.9	
36	0.218	0.000	0.218	498.7	242.5	48.4	41.7	8.4	214.5	43.1	1.076	35.5	29.8	28.1	5.6	33.7	0.3	0.6	
37	0.151	0.000	0.151	543.3	348.3	63.9	38.1	7.0	156.9	29.0	1.079	30.4	30.6	29.9	6.2	36.1	1.7	1.2	
38	0.181	0.000	0.181	531.3	258.1	48.5	38.3	7.2	234.8	44.3	1.077	36.7	32.6	24.4	6.3	30.8	0.0	0.0	
39	0.185	0.000	0.185	510.5	283.3	55.0	44.2	8.7	183.0	36.3	1.076	28.1	29.4	32.3	8.2	40.5	1.7	0.3	
40	0.062	0.000	0.062	579.4	349.0	59.8	39.6	6.9	190.8	33.3	1.082	29.8	28.6	28.8	10.0	38.8	2.2	0.6	
41	0.052	0.000	0.052	533.9	278.7	51.7	36.1	6.8	219.1	41.5	1.082	30.9	28.6	26.7	9.8	36.5	2.0	2.0	
42	0.170	0.000	0.170	522.6	295.4	56.3	40.2	7.8	186.9	35.9	1.078	31.9	32.0	28.4	5.0	33.4	1.9	0.8	
43	0.150	0.000	0.150	530.8	278.6	52.2	45.7	8.7	206.5	39.1	1.077	32.5	28.5	29.7	6.9	36.5	2.2	0.3	
44	0.216	0.000	0.217	517.2	277.4	53.5	40.3	7.8	199.5	38.7	1.079	34.8	32.5	24.2	6.8	31.0	1.5	0.3	
45	0.178	0.001	0.178	514.5	288.4	55.5	43.2	8.5	182.9	36.0	1.080	34.2	33.6	25.9	5.2	31.2	0.5	0.5	
46	0.052	0.000	0.052	549.8	263.2	47.8	32.9	6.0	253.7	46.1	1.080	30.4	28.0	31.8	7.7	39.6	1.0	1.1	
47	0.042	0.003	0.047	588.4	301.9	51.6	44.4	7.7	242.2	40.7	1.084	29.5	29.5	28.1	8.4	36.5	2.9	1.6	
48	0.044	0.001	0.046	575.8	343.3	59.5	45.0	7.9	187.6	32.7	1.083	25.5	32.9	30.0	7.8	37.8	3.0	0.8	
49	0.169	0.000	0.169	567.2	318.6	56.2	41.6	7.3	207.1	36.5	1.079	30.9	33.7	26.3	5.9	32.2	1.8	1.4	
50	0.141	0.000	0.141	576.1	327.3	57.2	37.7	6.6	211.2	36.3	1.080	30.4	29.6	29.4	7.9	37.3	2.2	0.5	
51	0.151	0.000	0.151	522.6	287.6	54.8	48.4	9.3	186.5	35.8	1.079	34.9	29.5	26.9	5.7	32.7	1.2	1.7	
52	0.214	0.000	0.214	503.7	286.3	56.6	44.2	8.8	173.2	34.6	1.078	35.8	31.9	25.1	4.3	29.5	1.7	1.2	
53	0.243	0.000	0.243	486.5	245.6	50.2	48.2	9.9	192.7	39.9	1.073	34.5	35.1	26.7	3.2	29.9	0.6	0.0	
54	0.257	0.000	0.257	519.4	307.6	59.4	49.2	9.5	162.6	31.1	1.076	35.1	34.9	25.7	3.3	29.0	0.9	0.0	
55	0.053	0.000	0.053	573.0	300.9	52.4	46.0	8.0	226.1	39.6	1.080	29.8	29.5	30.5	7.6	38.1	2.4	0.2	
56	0.052	0.000	0.054	561.4	300.2	53.5	46.1	8.2	215.2	38.3	1.080	30.6	30.2	28.1	6.5	34.6	2.8	1.8	
57	0.044	0.000	0.045	588.2	297.0	50.4	41.1	7.1	250.1	42.5	1.080	31.0	30.2	27.6	7.1	34.7	2.9	1.2	
58	0.100	0.000	0.100	540.4	325.1	60.1	43.8	8.1	171.5	31.8	1.082	30.8	31.5	26.8	7.8	34.6	1.8	1.3	
59	0.230	0.000	0.230	498.4	278.7	55.3	47.9	9.8	171.7	34.9	1.076	34.8	34.7	26.4	2.5	28.9	0.7	0.9	
60	0.208	0.000	0.208	536.7	303.3	56.5	43.0	8.0	190.3	35.5	1.074	31.0	29.7	30.0	7.8	37.8	1.2	0.3	
61	0.214	0.000	0.214	494.7	248.8	50.2	54.7	11.1	191.2	38.8	1.074	40.3	30.2	23.5	4.5	28.0	1.5	0.0	
62	0.223	0.000	0.223	497.9	273.5	54.8	45.8	9.4	178.6	35.8	1.076	32.1	32.9	27.6	5.3	32.9	1.2	0.9	
63	0.203	0.000	0.203	527.2	305.1	58.2	49.2	9.5	172.8	32.3	1.078	35.6	34.1	25.4	3.5	28.9	1.2	0.3	
64	0.201	0.000	0.201	501.2	300.0	60.0	32.3	6.4	169.0	33.5	1.076	30.9	30.5	30.2	5.7	35.9	1.9	0.9	
Pr > F <sup>3</sup>	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.19	0.09	0.01	< 0.01	0.15	< 0.01	0.03	0.04	0.07	< 0.01	< 0.01	0.14	0.50	
LSD <sup>3</sup>	0.048	0.009	0.046	46.6	68.6	NS	12.0*	2.5	58.5	NS	0.005	7.8	5.1	6.3*	3.3	7.5	NS	NS	

**Table 3. Effect of experimental treatment on value per acre of Russet Burbank tubers. (Treatment numbers correspond to those listed in Table 1)**

Treatment Number	Cost of Chemicals /Acre <sup>1</sup>	Gross Value of Yield		Net Value of Yield <sup>4</sup>		Effect of Treatment on Value <sup>5</sup>	
		Fresh Market <sup>2</sup>	Processing <sup>3</sup>	Fresh Market <sup>2</sup>	Processing <sup>3</sup>	Fresh Market <sup>2</sup>	Processing <sup>3</sup>
1	0.00	2349.30	1397.67	2349.30	1397.67	0.00	0.00
2	---	3108.53	1835.03	---	---	---	---
3	---	3104.67	1841.95	---	---	---	---
4	---	3228.43	1837.44	---	---	---	---
5	99.28	2689.33	1609.90	2590.05	1510.62	240.75	112.94
6	---	2448.72	1451.94	---	---	---	---
7	118.92	2801.31	1686.03	2682.39	1567.12	333.09	169.44
8	110.55	2788.39	1741.60	2677.84	1631.05	328.54	233.38
9	81.28	2453.08	1468.21	2371.80	1386.93	22.50	-10.74
10	91.95	2870.54	1689.42	2778.59	1597.47	429.29	199.80
11	91.95	3310.04	1950.53	3218.09	1858.58	868.79	460.91
12	---	2540.74	1593.77	---	---	---	---
13	75.94	2319.77	1416.98	2243.83	1341.05	-105.47	-56.63
14	91.06	2807.74	1684.42	2716.68	1593.36	367.38	195.68
15	84.10	2901.16	1693.89	2817.06	1609.79	467.76	212.12
16	77.14	2523.17	1500.53	2446.03	1423.39	96.73	25.71
17	---	2246.80	1364.99	---	---	---	---
18	---	2117.16	1343.55	---	---	---	---
19	---	2216.16	1379.51	---	---	---	---
20	---	2510.49	1548.61	---	---	---	---
21	---	2968.23	1760.28	---	---	---	---
22	---	2792.87	1675.16	---	---	---	---
23	---	3131.08	1822.82	---	---	---	---
24	---	2636.51	1619.16	---	---	---	---
25	---	2517.10	1537.41	---	---	---	---
26	---	2725.07	1649.00	---	---	---	---
27	---	2230.60	1380.75	---	---	---	---
28	110.05	2698.96	1712.72	2588.91	1602.67	239.61	205.00
29	99.39	2613.23	1551.92	2513.84	1452.54	164.54	54.86
30	---	2267.88	1399.66	---	---	---	---
31	---	3026.64	1761.14	---	---	---	---
32	31.09	2629.92	1593.56	2598.83	1562.47	249.53	164.80
33	64.16	2890.31	1673.48	2826.15	1609.32	476.85	211.65
34	---	2621.21	1523.68	---	---	---	---
35	---	2563.14	1527.57	---	---	---	---
36	31.90	2126.91	1312.40	2095.01	1280.50	-254.29	-117.17
37	61.60	2916.87	1708.44	2855.27	1646.84	505.97	249.16
38	93.78	2204.73	1383.29	2110.96	1289.52	-238.34	-108.16
39	66.28	2546.57	1473.25	2480.29	1406.97	130.99	9.30
40	---	3018.34	1786.25	---	---	---	---
41	---	2541.23	1527.48	---	---	---	---
42	75.37	2530.11	1537.22	2454.74	1461.85	105.44	64.18
43	79.69	2480.16	1485.92	2400.47	1406.23	51.17	8.56
44	91.76	2352.88	1456.44	2261.12	1364.68	-88.18	-32.99
45	104.72	2404.56	1500.21	2299.84	1395.49	-49.46	-2.19
46	73.96	2443.66	1482.98	2369.70	1409.02	20.40	11.35
47	71.54	2796.94	1674.18	2725.41	1602.64	376.11	204.97
48	80.14	3069.47	1787.67	2989.33	1707.54	640.03	309.86
49	66.26	2738.63	1668.82	2672.36	1602.56	323.07	204.88
50	---	2843.07	1726.80	---	---	---	---
51	---	2430.86	1499.43	---	---	---	---
52	148.09	2326.49	1435.96	2178.40	1287.87	-170.90	-109.80

Treatment Number	Cost of Chemicals /Acre <sup>1</sup>	Gross Value of Yield		Net Value of Yield <sup>4</sup>		Effect of Treatment on Value <sup>5</sup>	
		Fresh Market <sup>2</sup>	Processing <sup>3</sup>	Fresh Market <sup>2</sup>	Processing <sup>3</sup>	Fresh Market <sup>2</sup>	Processing <sup>3</sup>
53	135.15	2101.42	1234.24	1966.27	1099.09	-383.03	-298.59
54	135.84	2451.16	1487.66	2315.32	1351.82	-33.98	-45.86
55	84.76	2716.77	1592.30	2632.01	1507.54	282.71	109.86
56	90.60	2673.97	1591.63	2583.37	1501.03	234.07	103.36
57	71.44	2706.25	1620.58	2634.81	1549.14	285.51	151.47
58	---	2775.52	1673.29	---	---	---	---
59	81.28	2312.57	1383.98	2231.28	1302.70	-118.02	-94.98
60	81.28	2633.44	1495.53	2552.16	1414.24	202.86	16.57
61	81.28	2026.95	1282.74	1945.67	1201.46	-403.64	-196.21
62	81.28	2334.96	1388.40	2253.68	1307.11	-95.62	-90.56
63	81.28	2462.58	1511.10	2381.30	1429.82	32.00	32.15
64	81.28	2550.90	1515.24	2469.62	1433.96	120.32	36.29
Pr > F <sup>6</sup>	---	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD <sup>6</sup>	---	549.08	272.95	554.54	266.39	554.54	266.39

- 1 1999 Season-long cost of chemicals/Acre (rate, number of applications and retail cost are included in calculation). Retail prices used include:  
 Acrobat 50WP - \$13.95/lb; Curzate 60DF - \$27.75/lb; Penncozeb 75DF - \$2.15/lb;  
 Agri Tin - \$28/lb; Dithane DF Rainshield NT - \$2.20/lb; Polyram 80DF - \$2.10/lb;  
 Auxigro - \$55/lb; Early Harvest - \$192/gal; Quadris SC - \$265/gal;  
 Bravo Ultrex 82.5 WDG - \$6.80/lb; Kocide 2000 - \$2.65/lb; Super Tin 80WP - \$28/lb;  
 Bravo WS 6F - \$45/gal; Manex 4L - \$14.95/gal; Tattoo C - \$98/gal;  
 Bravo Zn 4.17 F - \$34/gal; Manzate 75DF - \$2.15/lb;  
 Champ 2 - \$23/gal; Nufilm - \$22/gal;
- If ANY component of the treatment was an experimental product with no retail price, the cost of chemicals was not calculated.
- 2 Typical 1999 fresh market pricing: 4-6 oz. \$8.50/cwt, 6-10 oz. \$10.50/cwt, 10-13 oz. \$11.50, >13 oz. \$12.00, < 4 oz. and culls \$1.75/cwt.  
 3 Typical 1999 processing contract pricing: Base price is \$4.70/cwt for 69% US#1 (4 oz. minimum) with specific gravity of 1.077. A premium is paid for > 19% 10 oz. or greater. For each 1% > 19% (max.= 32%) > 10 oz. the price increases \$0.03/cwt. The price decreases \$0.03/cwt for each 1% below 19% to 10%. A decrease of \$0.05 for each 1% of potatoes below 10% 10 oz. For each .001 difference in specific gravity > or < 1.080 (max.= 1.085), the price increases or decreases \$0.02/cwt. If the specific gravity is < 1.072 there is a \$.25 decrease in price for each .001. Minimum specific gravity accepted is 1.070. Value of culls for processing is \$1.50/cwt.  
 4 Gross value minus cost of chemicals applied.  
 5 Net value for the treatment minus net value of the untreated control.  
 6 Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated. NS = not significant at the P = 0.05 (or P = 0.10) level. \* = Differences between pairs of treatments were significant at P = 0.10 (but not at P = 0.05).

**Table 4. Data ranked according to several disease and yield measurements (Treatment numbers correspond to those listed in Table 1).**

**Sorted by Relative AUDPC (Combined EB & LB) (increasing)**

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
57	0.045	588.2	297.0	1620.58	151.47
48	0.046	575.8	343.3	1787.67	309.86
47	0.047	588.4	301.9	1674.18	204.97
41	0.052	533.9	278.7	1527.48	---
46	0.052	549.8	263.2	1482.98	11.35
55	0.053	573.0	300.9	1592.30	109.86
8	0.054	579.0	337.6	1741.60	233.38
56	0.054	561.4	300.2	1591.63	103.36
7	0.055	563.8	316.1	1686.03	169.44
12	0.055	579.6	292.4	1593.77	---
11	0.056	595.3	383.6	1950.53	460.91
31	0.057	580.6	335.7	1761.14	---
33	0.057	549.6	316.9	1673.48	211.65
10	0.061	584.2	307.1	1689.42	199.80
40	0.062	579.4	349.0	1786.25	---
28	0.065	588.5	324.1	1712.72	205.00
25	0.069	550.7	283.6	1537.41	---
14	0.073	561.6	328.2	1684.42	195.68
15	0.083	549.9	334.0	1693.89	212.12
58	0.100	540.4	325.1	1673.29	---
21	0.104	583.9	344.0	1760.28	---
26	0.106	547.3	316.0	1649.00	---
24	0.111	564.6	312.2	1619.16	---
4	0.121	575.7	362.9	1837.44	---
20	0.122	556.7	284.8	1548.61	---
23	0.124	559.9	365.8	1822.82	---
32	0.126	539.7	303.0	1593.56	164.80
16	0.127	516.0	298.3	1500.53	25.71
22	0.129	569.9	325.6	1675.16	---
5	0.133	543.4	311.4	1609.90	112.94
27	0.141	533.0	256.0	1380.75	---
50	0.141	576.1	327.3	1726.80	---
43	0.150	530.8	278.6	1485.92	8.56
37	0.151	543.3	348.3	1708.44	249.16
51	0.151	522.6	287.6	1499.43	---
34	0.154	537.6	295.2	1523.68	---
3	0.165	598.1	356.2	1841.95	---
49	0.169	567.2	318.6	1668.82	204.88
42	0.170	522.6	295.4	1537.22	64.18
45	0.178	514.5	288.4	1500.21	-2.19

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
2	0.181	565.8	367.5	1835.03	---
38	0.181	531.3	258.1	1383.29	-108.16
39	0.185	510.5	283.3	1473.25	9.30
29	0.188	534.6	299.0	1551.92	54.86
64	0.201	501.2	300.0	1515.24	36.29
9	0.203	521.6	279.2	1468.21	-10.74
63	0.203	527.2	305.1	1511.10	32.15
60	0.208	536.7	303.3	1495.53	16.57
52	0.214	503.7	286.3	1435.96	-109.80
61	0.214	494.7	248.8	1282.74	-196.21
44	0.217	517.2	277.4	1456.44	-32.99
36	0.218	498.7	242.5	1312.40	-117.17

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
35	0.221	495.1	309.8	1527.57	---
18	0.223	502.5	264.7	1343.55	---
62	0.223	497.9	273.5	1388.40	-90.56
59	0.230	498.4	278.7	1383.98	-94.98
19	0.241	472.1	280.2	1379.51	---
53	0.243	486.5	245.6	1234.24	-298.59
17	0.245	468.0	278.4	1364.99	---
6	0.246	502.4	298.3	1451.94	---
13	0.249	498.5	282.5	1416.98	-56.63
54	0.257	519.4	307.6	1487.66	-45.86
1	0.294	458.9	300.8	1397.67	0.00

**Sorted by total yield (decreasing)**

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
3	0.165	598.1	356.2	1841.95	---
11	0.056	595.3	383.6	1950.53	460.91
28	0.065	588.5	324.1	1712.72	205.00
47	0.047	588.4	301.9	1674.18	204.97
57	0.045	588.2	297.0	1620.58	151.47
10	0.061	584.2	307.1	1689.42	199.80
21	0.104	583.9	344.0	1760.28	---
31	0.057	580.6	335.7	1761.14	---
12	0.055	579.6	292.4	1593.77	---
40	0.062	579.4	349.0	1786.25	---
8	0.054	579.0	337.6	1741.60	233.38
50	0.141	576.1	327.3	1726.80	---
48	0.046	575.8	343.3	1787.67	309.86
4	0.121	575.7	362.9	1837.44	---
55	0.053	573.0	300.9	1592.30	109.86
22	0.129	569.9	325.6	1675.16	---
49	0.169	567.2	318.6	1668.82	204.88
2	0.181	565.8	367.5	1835.03	---
24	0.111	564.6	312.2	1619.16	---
7	0.055	563.8	316.1	1686.03	169.44
14	0.073	561.6	328.2	1684.42	195.68
56	0.054	561.4	300.2	1591.63	103.36
23	0.124	559.9	365.8	1822.82	---
20	0.122	556.7	284.8	1548.61	---
25	0.069	550.7	283.6	1537.41	---
15	0.083	549.9	334.0	1693.89	212.12
46	0.052	549.8	263.2	1482.98	11.35
33	0.057	549.6	316.9	1673.48	211.65
26	0.106	547.3	316.0	1649.00	---
5	0.133	543.4	311.4	1609.90	112.94
37	0.151	543.3	348.3	1708.44	249.16
58	0.100	540.4	325.1	1673.29	---
32	0.126	539.7	303.0	1593.56	164.80

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
34	0.154	537.6	295.2	1523.68	---
60	0.208	536.7	303.3	1495.53	16.57
29	0.188	534.6	299.0	1551.92	54.86
41	0.052	533.9	278.7	1527.48	---
27	0.141	533.0	256.0	1380.75	---
38	0.181	531.3	258.1	1383.29	-108.16
43	0.150	530.8	278.6	1485.92	8.56
63	0.203	527.2	305.1	1511.10	32.15
42	0.170	522.6	295.4	1537.22	64.18
51	0.151	522.6	287.6	1499.43	---
9	0.203	521.6	279.2	1468.21	-10.74
54	0.257	519.4	307.6	1487.66	-45.86
44	0.217	517.2	277.4	1456.44	-32.99
16	0.127	516.0	298.3	1500.53	25.71
45	0.178	514.5	288.4	1500.21	-2.19
39	0.185	510.5	283.3	1473.25	9.30
52	0.214	503.7	286.3	1435.96	-109.80
18	0.223	502.5	264.7	1343.55	---
6	0.246	502.4	298.3	1451.94	---
64	0.201	501.2	300.0	1515.24	36.29
36	0.218	498.7	242.5	1312.40	-117.17
13	0.249	498.5	282.5	1416.98	-56.63
59	0.230	498.4	278.7	1383.98	-94.98
62	0.223	497.9	273.5	1388.40	-90.56
35	0.221	495.1	309.8	1527.57	---
61	0.214	494.7	248.8	1282.74	-196.21
30	0.184	490.1	270.3	1399.66	---
53	0.243	486.5	245.6	1234.24	-298.59
19	0.241	472.1	280.2	1379.51	---
17	0.245	468.0	278.4	1364.99	---
1	0.294	458.9	300.8	1397.67	0.00

**Sorted by yield of US#1 potatoes (decreasing)**

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
11	0.056	595.3	383.6	1950.53	460.91
2	0.181	565.8	367.5	1835.03	---
23	0.124	559.9	365.8	1822.82	---
4	0.121	575.7	362.9	1837.44	---

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
3	0.165	598.1	356.2	1841.95	---
40	0.062	579.4	349.0	1786.25	---
37	0.151	543.3	348.3	1708.44	249.16
21	0.104	583.9	344.0	1760.28	---

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
48	0.046	575.8	343.3	1787.67	309.86
8	0.054	579.0	337.6	1741.60	233.38
31	0.057	580.6	335.7	1761.14	---
15	0.083	549.9	334.0	1693.89	212.12
14	0.073	561.6	328.2	1684.42	195.68
50	0.141	576.1	327.3	1726.80	---
22	0.129	569.9	325.6	1675.16	---
58	0.100	540.4	325.1	1673.29	---
28	0.065	588.5	324.1	1712.72	205.00
49	0.169	567.2	318.6	1668.82	204.88
33	0.057	549.6	316.9	1673.48	211.65
7	0.055	563.8	316.1	1686.03	169.44
26	0.106	547.3	316.0	1649.00	---
24	0.111	564.6	312.2	1619.16	---
5	0.133	543.4	311.4	1609.90	112.94
35	0.221	495.1	309.8	1527.57	---
54	0.257	519.4	307.6	1487.66	-45.86
10	0.061	584.2	307.1	1689.42	199.80
63	0.203	527.2	305.1	1511.10	32.15
60	0.208	536.7	303.3	1495.53	16.57
32	0.126	539.7	303.0	1593.56	164.80
47	0.047	588.4	301.9	1674.18	204.97
55	0.053	573.0	300.9	1592.30	109.86
1	0.294	458.9	300.8	1397.67	0.00
56	0.054	561.4	300.2	1591.63	103.36
64	0.201	501.2	300.0	1515.24	36.29
29	0.188	534.6	299.0	1551.92	54.86
6	0.246	502.4	298.3	1451.94	---
16	0.127	516.0	298.3	1500.53	25.71

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
57	0.045	588.2	297.0	1620.58	151.47
42	0.170	522.6	295.4	1537.22	64.18
34	0.154	537.6	295.2	1523.68	---
12	0.055	579.6	292.4	1593.77	---
45	0.178	514.5	288.4	1500.21	-2.19
51	0.151	522.6	287.6	1499.43	---
52	0.214	503.7	286.3	1435.96	-109.80
20	0.122	556.7	284.8	1548.61	---
25	0.069	550.7	283.6	1537.41	---
39	0.185	510.5	283.3	1473.25	9.30
13	0.249	498.5	282.5	1416.98	-56.63
19	0.241	472.1	280.2	1379.51	---
9	0.203	521.6	279.2	1468.21	-10.74
41	0.052	533.9	278.7	1527.48	---
59	0.230	498.4	278.7	1383.98	-94.98
43	0.150	530.8	278.6	1485.92	8.56
17	0.245	468.0	278.4	1364.99	---
44	0.217	517.2	277.4	1456.44	-32.99
62	0.223	497.9	273.5	1388.40	-90.56
30	0.184	490.1	270.3	1399.66	---
30	0.184	490.1	270.3	1399.66	---
18	0.223	502.5	264.7	1343.55	---
46	0.052	549.8	263.2	1482.98	11.35
38	0.181	531.3	258.1	1383.29	-108.16
27	0.141	533.0	256.0	1380.75	---
61	0.214	494.7	248.8	1282.74	-196.21
53	0.243	486.5	245.6	1234.24	-298.59
36	0.218	498.7	242.5	1312.40	-117.17

**Sorted by gross value of yield (decreasing)**

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
11	0.056	595.3	383.6	1950.53	460.91
3	0.165	598.1	356.2	1841.95	---
4	0.121	575.7	362.9	1837.44	---
2	0.181	565.8	367.5	1835.03	---
23	0.124	559.9	365.8	1822.82	---
48	0.046	575.8	343.3	1787.67	309.86
40	0.062	579.4	349.0	1786.25	---
31	0.057	580.6	335.7	1761.14	---
21	0.104	583.9	344.0	1760.28	---
8	0.054	579.0	337.6	1741.60	233.38
50	0.141	576.1	327.3	1726.80	---
28	0.065	588.5	324.1	1712.72	205.00
37	0.151	543.3	348.3	1708.44	249.16
15	0.083	549.9	334.0	1693.89	212.12
10	0.061	584.2	307.1	1689.42	199.80
7	0.055	563.8	316.1	1686.03	169.44
14	0.073	561.6	328.2	1684.42	195.68
22	0.129	569.9	325.6	1675.16	---
47	0.047	588.4	301.9	1674.18	204.97
33	0.057	549.6	316.9	1673.48	211.65
58	0.100	540.4	325.1	1673.29	---
49	0.169	567.2	318.6	1668.82	204.88
26	0.106	547.3	316.0	1649.00	---
57	0.045	588.2	297.0	1620.58	151.47
24	0.111	564.6	312.2	1619.16	---

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
5	0.133	543.4	311.4	1609.90	112.94
12	0.055	579.6	292.4	1593.77	---
32	0.126	539.7	303.0	1593.56	164.80
55	0.053	573.0	300.9	1592.30	109.86
56	0.054	561.4	300.2	1591.63	103.36
29	0.188	534.6	299.0	1551.92	54.86
20	0.122	556.7	284.8	1548.61	---
25	0.069	550.7	283.6	1537.41	---
42	0.170	522.6	295.4	1537.22	64.18
35	0.221	495.1	309.8	1527.57	---
41	0.052	533.9	278.7	1527.48	---
34	0.154	537.6	295.2	1523.68	---
64	0.201	501.2	300.0	1515.24	36.29
63	0.203	527.2	305.1	1511.10	32.15
16	0.127	516.0	298.3	1500.53	25.71
45	0.178	514.5	288.4	1500.21	-2.19
51	0.151	522.6	287.6	1499.43	---
60	0.208	536.7	303.3	1495.53	16.57
54	0.257	519.4	307.6	1487.66	-45.86
43	0.150	530.8	278.6	1485.92	8.56
46	0.052	549.8	263.2	1482.98	11.35
39	0.185	510.5	283.3	1473.25	9.30
9	0.203	521.6	279.2	1468.21	-10.74
44	0.217	517.2	277.4	1456.44	-32.99
6	0.246	502.4	298.3	1451.94	---

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
52	0.214	503.7	286.3	1435.96	-109.80
13	0.249	498.5	282.5	1416.98	-56.63
30	0.184	490.1	270.3	1399.66	---
1	0.294	458.9	300.8	1397.67	0.00
62	0.223	497.9	273.5	1388.40	-90.56
59	0.230	498.4	278.7	1383.98	-94.98
38	0.181	531.3	258.1	1383.29	-108.16
27	0.141	533.0	256.0	1380.75	---

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
19	0.241	472.1	280.2	1379.51	---
17	0.245	468.0	278.4	1364.99	---
18	0.223	502.5	264.7	1343.55	---
36	0.218	498.7	242.5	1312.40	-117.17
61	0.214	494.7	248.8	1282.74	-196.21
53	0.243	486.5	245.6	1234.24	-298.59

Sorted by effect of treatment on processing value (decreasing)

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
11	0.056	595.3	383.6	1950.53	460.91
48	0.046	575.8	343.3	1787.67	309.86
37	0.151	543.3	348.3	1708.44	249.16
8	0.054	579.0	337.6	1741.60	233.38
15	0.083	549.9	334.0	1693.89	212.12
33	0.057	549.6	316.9	1673.48	211.65
28	0.065	588.5	324.1	1712.72	205.00
47	0.047	588.4	301.9	1674.18	204.97
49	0.169	567.2	318.6	1668.82	204.88
10	0.061	584.2	307.1	1689.42	199.80
14	0.073	561.6	328.2	1684.42	195.68
7	0.055	563.8	316.1	1686.03	169.44
32	0.126	539.7	303.0	1593.56	164.80
57	0.045	588.2	297.0	1620.58	151.47
5	0.133	543.4	311.4	1609.90	112.94
55	0.053	573.0	300.9	1592.30	109.86
56	0.054	561.4	300.2	1591.63	103.36
42	0.170	522.6	295.4	1537.22	64.18
29	0.188	534.6	299.0	1551.92	54.86
64	0.201	501.2	300.0	1515.24	36.29

Trt no.	Relative AUDPC Combined	Yield		Processing Value	
		TOTAL	US#1	Gross Value	Effect of Treatment
63	0.203	527.2	305.1	1511.10	32.15
16	0.127	516.0	298.3	1500.53	25.71
60	0.208	536.7	303.3	1495.53	16.57
46	0.052	549.8	263.2	1482.98	11.35
39	0.185	510.5	283.3	1473.25	9.30
43	0.150	530.8	278.6	1485.92	8.56
1	0.294	458.9	300.8	1397.67	0.00
45	0.178	514.5	288.4	1500.21	-2.19
9	0.203	521.6	279.2	1468.21	-10.74
44	0.217	517.2	277.4	1456.44	-32.99
54	0.257	519.4	307.6	1487.66	-45.86
13	0.249	498.5	282.5	1416.98	-56.63
62	0.223	497.9	273.5	1388.40	-90.56
59	0.230	498.4	278.7	1383.98	-94.98
38	0.181	531.3	258.1	1383.29	-108.16
52	0.214	503.7	286.3	1435.96	-109.80
36	0.218	498.7	242.5	1312.40	-117.17
61	0.214	494.7	248.8	1282.74	-196.21
53	0.243	486.5	245.6	1234.24	-298.59