

### Evaluation of fungicides for the control of early blight of potato - Hancock, 2007

Potatoes were planted 24 Apr to initiate a field trial at the Hancock Agricultural Research Station in central WI to evaluate fungicide efficacy for control of potato foliar blights. Treatments were included for both early and late blight control but no late blight (caused by *Phytophthora infestans*) was observed in Wisconsin during the 2007 growing season. Approximately 2 oz seedpieces were cut mechanically on 19 Apr from US#1 Russet Burbank tubers. Seedpieces were allowed to heal before planting. A randomized complete block design with four replications was used for the trial and treatment plots consisted of four 24-ft-long rows spaced 36 in. apart with 15 in. spacing in the row. To minimize soil compaction and damage to plants in rows used for foliar and yield evaluation, drive rows for pesticide application equipment were placed adjacent to plots. The soil type was Plainfield loamy sand, with pH ranging from 5.7-5.9 across the fields in which the trial was planted. Fertilizer applied was: 0-0-60, 250 lb/A, broadcast 3 Apr; 5-10-30, 550 lb/A, banded in the row at planting; and sidedress applications on 8 May (21-0-0, 350 lb/A), 29 May (46-0-0, 225 lb/A) and 30 May (Cal-Sul, 550 lb/A). Insects were controlled with Admire 2F incorporated in the fertilizer at planting (16 fl oz/500 lb) and foliar application of Spintor 2SC (6.0 fl oz/A) 18 Jun and 7 Aug, Agrimek 0.15EC (12.0 fl oz/A) 28 Jun, Actara (1.5 fl oz/A) 20 Jul and Provado 1.6F (3.8 fl oz) 1 Aug. Lorox DF (1.0 lb/A) 7 May, Matrix (1 oz/A) + NIS (2 pt/A) 9 Jun and Poast (1.5 pt/A) + Crop Oil Concentrate (1.25 pt/A) 6 Jul were applied for weed control. A growth regulator, Royal MH-30 (2.0 gal/A) was applied to the foliage 9 Aug to improve tuber shape and uniformity of size. Fungicide treatments were applied weekly to all four rows of each plot from 26 Jun - 22 Aug, according to treatment protocol, for a total of nine applications. Treatments were applied with a plot sprayer consisting of a tractor-mounted boom, pressurized with an air compressor, using Tee Jet Hollow Disc Cone D3-23 nozzles (15 nozzles at 8-in. spacing). Fungicides were applied at a rate equivalent to 35 gal water/A at 40 psi. Plots were not inoculated but relied on natural dispersal of inoculum for disease establishment. Only early blight caused by *Alternaria solani* was observed in the trial. Early blight severity was rated weekly from 20 Jun - 31 Aug using the Horsfall-Barratt rating scale. Vines were killed with applications of Reglone (1.0 pt/A) + NIS (1.0 pt/A) 31 Aug and 5 Sep. On 17-19 Sep the two center rows of each plot (a total of 48 ft of row) were machine harvested and graded. Tubers were graded into US#1, undersize, and cull categories. An optical size grader was used to sort all US#1 potatoes from each treatment plot 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 lb samples from selected treatments were placed in storage immediately after grading. These will be evaluated for tuber decay, silver scurf, and black scurf after several months in storage. Rainfall recorded during the growing season (in.) was: 24-30 Apr (1.7); May (3.0); Jun (1.1); Jul (2.5); Aug (7.9); 1-16 Sep (1.0). An additional 20.5 in. of water was applied as overhead sprinkler irrigation in 39 applications (21 May - 10 Sep).

Highly favorable growing conditions prevailed during the early to mid portion of the 2007 growing season. During August, above normal temperatures and rainfall were highly conducive to disease development. The first symptoms of early blight were observed on 26 Jun. Early blight progressed very slowly during July, but during August, disease severity increased rapidly, especially in plots left unsprayed with fungicide. During the week of 31 Jul to 7 Aug, disease severity in unsprayed plots increased from 8.1% to 53.7%. On 20 Aug, 11 days prior to the application of vine desiccant, disease severity was still <50% for six treatment programs (11, 14, 15, 16, 24, 25). All of the programs providing this level of disease control included either one or two applications of Endura. Over half of the fungicide treatment programs (30 of 56 programs) consisted of season-long programs using multiple chemistries. Thirteen treatment programs included Endura for at least one application with other chemistries for the remaining applications. Using the relative area under the disease progress curve (RAUDPC) as a measure of treatment efficacy, nine treatment programs (11, 14, 15, 16, 17, 24, 25, 26, 46) resulted in a RAUDPC of 0.200 or lower compared with the RAUDPC of 0.334 for the untreated control plots (LSD = 0.060). All of these top nine programs contained at least one application of Endura alternated or combined with up to five other fungicide modes of action. Highest total yield was generally associated with the best early blight control. Total yields ranged from a low of 510.7 cwt/A (treatment 18) to a high of 644.3 cwt/A (treatment 16). Significant differences were

observed between treatments in weight of US#1 tubers and the percentage of US#1 tubers in most of the size grade categories. The proportion of tubers in the 6-10 oz category ranged from 22.3 – 35.1% of the US#1 yield. This tuber size category is most important to both fresh market and processing sales. For the 16 treatment programs having 30% or more of the US#1 tubers in the 6-10 oz category, nine treatment programs included at least one treatment with Endura. Most fungicide treatment programs had a positive effect on both fresh market and processing crop values. Compared with the untreated check, registered treatment effect on fresh market value ranged from a negative \$328 to a positive \$1585 per acre. Compared with the untreated check, registered treatment effect on processing value ranged from a negative \$261 to a positive \$726 per acre.

**Table 1. Effect of fungicide treatment on severity of early blight and relative area under the disease progress curve.**

#	Treatment	Rate/A	Schedule summary <sup>1</sup>	Mean early blight severity (%) <sup>2</sup>												Relative AUDPC <sup>3</sup>
				20 Jun	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug	31 Aug		
1.	Untreated			0.7	1.9	2.2	2.8	4.4	8.1	53.7	76.0	89.0	97.2	99.0	0.334	
2.	Bravo Zn 4.17 F	2.125 pt	Weekly	0.6	2.0	2.8	3.4	3.1	4.8	30.5	63.9	85.5	95.0	98.0	0.291	
3.	Bravo WS	1.5 pt	Weekly	0.7	2.2	2.2	2.9	3.7	3.9	48.8	76.0	93.1	97.8	99.4	0.330	
4.	Quadris 2.08 SC	6 fl oz	Appl 1 3 5	0.6	1.9	1.9	2.8	3.2	3.8	20.9	52.0	75.4	91.1	96.0	0.255	
5.	Bravo Zn 4.17 F Dithane DF increasing rates	2.125 pt	Remaining applications													
		1.0 lb	Appl 1 2 3													
		1.5 lb	Appl 4 5 6													
6.	Sonata + Dithane DF + Biotune 1 pt/100 gal	2.0 lb	Appl 7 8 9	0.9	1.8	1.9	2.5	3.2	5.0	28.2	59.2	82.6	90.3	96.5	0.276	
		1.5 lb	Appl 1 3 5 7 9													
7.	Evito 4F + Bravo Zn 4.17F + NIS 0.25% V/V	6.0 fl oz	Appl 2 4 6 8	0.4	1.9	2.5	3.2	3.8	4.8	34.4	66.6	83.0	96.2	98.7	0.297	
		1.5 pt	Appl 1 3 5													
8.	Evito 4F + Bravo Zn 4.17F + NIS 0.25% V/V	2.125 pt	Appl 2 4 6-9	0.9	1.8	2.3	2.9	3.1	3.8	32.2	58.6	81.3	93.3	95.2	0.280	
		1.5 pt	Appl 1 3 5													
9.	Polyoxin-D 11.3 WDG	2.125 pt	Appl 2 4 6-9	0.6	1.8	2.5	3.2	3.1	4.2	34.0	56.1	82.4	96.0	98.4	0.284	
		6.2 oz	Weekly	0.4	1.6	2.3	2.8	3.7	4.8	47.1	73.7	87.7	97.8	99.0	0.321	
10.	MicroFlo Chlorothalonil 6SC	1.5 pt	Weekly	1.2	1.5	2.2	2.6	2.3	4.4	24.8	54.4	77.1	93.7	95.5	0.264	
		2.12 pt	Appl 1 3 5 9													
11.	Echo Zn Headline + Echo Zn	6 fl oz	Appl 2													
		1.5 pt	Appl 4													
12.	Echo Zn Endura + Echo Zn	2.5 oz	Appl 6													
		1.8 pt	Appl 7 8	0.6	1.6	2.2	2.6	2.5	3.2	7.3	32.4	49.0	82.3	85.9	0.186	
13.	Echo Zn Endura + Echo Zn	2.12 pt	Appl 1 3 5 9													
		2.5 oz	Appl 2													
14.	Echo Zn Headline + Echo Zn	6 fl oz	Appl 4													
		1.5 pt	Appl 6													
15.	Echo Zn Dithane DF + Super Tin	2.5 oz	Appl 7 8													
		1.8 pt	Appl 7 8	1.2	1.8	2.3	2.3	2.3	2.8	13.2	43.8	63.7	83.8	87.6	0.218	

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				20 Jun	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug		31 Aug	
13.	Echo Zn Headline + Echo Zn Endura + Echo Zn Endura + Echo Zn Dithane DF + Super Tin	2.12 pt 6 fl oz 1.5 pt 2.5 oz 1.5 pt 2.5 oz 1.8 pt 2 lb 2.5 oz	Appl 1 3 5 9 Appl 2 Appl 4 Appl 6 Appl 7 8	1.0	1.9	1.6	2.5	2.8	2.8	2.8	18.0	49.7	65.0	80.1	87.7	0.227
14.	Echo Zn Headline + Echo Zn Endura + Echo Zn Headline + Echo Zn Endura + Echo Zn Dithane DF + Super Tin	2.12 pt 6 fl oz 1.5 pt 2.5 oz 1.5 pt 6 fl oz 1.8 pt 2.5 oz 1.8 pt 2 lb 2.5 oz	Appl 1 3 9 Appl 2 Appl 4 Appl 5 Appl 6 Appl 7 8	0.9	1.8	2.0	2.9	2.3	2.3	3.2	7.6	29.6	45.1	73.6	82.3	0.172
15.	Dithane DF Headline + Dithane DF Endura + Echo Zn Scala 60 SC + Gavel 75 DF Endura + Dithane DF Gavel 75 DF Echo Zn	2 lb 6 fl oz 2 lb 2.5 oz 2 pt 7 fl oz 2 lb 3.5 oz 2 lb 2 lb 2 pt	Appl 1 2 9 Appl 3 Appl 4 Appl 5 Appl 6 Appl 7 Appl 8	1.0	2.0	1.6	2.3	2.6	2.6	2.3	6.9	34.2	42.8	78.9	85.9	0.178
16.	Echo Zn Headline + Dithane DF Endura + Scala 60 SC + Echo Zn Headline + Dithane DF Endura + Scala 60 SC + Echo Zn Gavel 75 DF Echo Zn	2 pt 6 fl oz 2 lb 2.5 oz 5 fl oz 2 pt 10 fl oz 2 lb 2.5 oz 7 fl oz 2 pt 2 lb 2 pt	Appl 1 2 Appl 3 Appl 4 Appl 5 Appl 6 Appl 7, 9 Appl 8	0.9	1.8	1.6	2.2	2.5	2.5	2.6	4.7	8.2	15.5	67.6	76.2	0.112

#	Treatment	Rate/A	Schedule summary <sup>1</sup>	Mean early blight severity (%) <sup>2</sup>											Relative AUDPC <sup>3</sup>
				20 Jun	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug	31 Aug	
17.	Echo ZN Headline + Dithane DF Scala 60 SC + Echo ZN Headline + Dithane DF Endura + Scala 60 SC + Echo ZN Gavel 75 DF Dithane DF + Super Tin	2 pt 6 fl oz 2 lb 5 fl oz 2 pt 10 fl oz 2 lb 3.5 oz 7 fl oz 1.5 pt 2 lb 2 lb 2.5 oz	Appl 1 2 Appl 3 Appl 4 Appl 5 Appl 6, 8 Appl 7 Appl 9	0.9	1.3	2.0	2.5	2.3	2.8	11.7	27.1	55.9	79.5	85.1	0.188
18.	Cuprofix Dispers Ultra 40DF, increasing rates	2.0 lb 2.5 lb 3.0 lb	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	1.0	1.3	2.0	2.9	3.8	6.4	58.6	80.9	92.2	97.2	99.4	0.345
19.	LEM17 072 EC (200 G/L)	10 fl oz	weekly	0.7	1.5	2.5	2.3	2.3	3.1	8.8	44.5	72.5	89.3	95.3	0.229
20.	LEM17 072 EC (200 G/L)	17 fl oz	weekly	0.7	1.0	1.8	2.9	2.5	2.6	18.2	45.3	59.8	79.6	88.4	0.217
21.	LEM17 072 EC (200 G/L)	24 fl oz	weekly	0.7	1.2	1.9	2.5	2.6	3.1	13.2	49.6	63.6	86.5	91.5	0.226
22.	LEM17 070 SC (200 G/L)	17 fl oz	weekly	0.6	1.5	1.6	2.5	2.6	3.2	15.2	48.1	63.6	86.1	90.3	0.226
23.	LEM17 070 SC (200 G/L)	24 fl oz	weekly	1.2	1.8	2.3	2.8	2.5	3.7	13.8	54.3	76.6	91.1	96.9	0.251
24.	Tanos 50WG + Manzate 75WG	6 oz 1.5 lb 2.5 oz	Appl 1 3 5 7 9 Appl 2 4 6 8	1.0	1.2	2.3	2.6	2.5	3.7	6.9	33.5	43.9	82.4	87.0	0.182
25.	Tanos + Manzate Pro-Stick Endura + Bravo Zn Manzate + Super-Tin	6.0 oz 1.5 lb 3.5 oz 1.5 pt 1.5 lb 2.5 oz	Appl 1 3 Appl 2 4 Appl 5 6 7 8 9	1.3	2.0	1.9	2.5	2.8	2.3	8.1	27.3	34.4	72.7	80.9	0.159
26.	Tanos + Manzate Pro-Stick + Kocide 3000 Manzate Pro-Stick + Kocide 3000 Endura + Bravo Zn Manzate Pro-Stick + Super-Tin	8.0 oz 1.5 lb 1.5 lb 1.5 lb 1.5 lb 3.5 oz 1.5 pt 1.5 lb 2.5 oz	Appl 1 4 Appl 2 Appl 3 5 Appl 6-9	0.6	1.5	2.3	2.3	2.5	3.1	7.9	36.8	53.7	73.7	85.9	0.188
27.	JE874 SE (2.1 LB/GAL) + Manzate Pro-Stick Manzate Pro-Stick	6 fl oz 1.5 lb 2 lb	Appl 1 3 5 7 9 Appl 2 4 6 8	0.7	1.3	2.6	2.9	2.8	4.1	18.2	55.9	78.9	92.8	96.3	0.261
28.	Bravo Weather Stik (6 FL) increasing rates	1.0 pt 1.25 pt 1.5 pt	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	0.4	1.2	2.2	3.1	3.4	5.4	39.1	65.6	88.0	97.5	99.1	0.305

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				20 Jun	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug	31 Aug		
29.	Equus 720 SST (6 FL) increasing rates	1.0 pt 1.25 pt 1.5 pt	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	1.3	1.2	2.5	2.5	3.2	3.2	3.7	21.1	62.5	84.9	97.7	99.4	0.280
30.	Equus 500 Zn (4.17 FL) increasing rates	1.5 pt 1.8 pt 2.125 pt	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	1.0	1.0	2.3	2.9	3.1	3.8	34.2	68.3	85.9	97.4	98.7	0.299	
31.	Bravo Zn, increasing rates	1.5 pt 1.8 pt 2.125 pt	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	0.7	1.8	2.0	2.9	3.2	3.4	22.1	60.5	82.4	95.3	98.2	0.275	
32.	Equus 82.5% WDG increasing rates	0.9 lb 1.15 lb 1.4 lb	Appl 1 2 3 Appl 4 5 6 Appl 7 8 9	0.9	1.8	2.3	2.9	3.4	3.9	40.6	70.3	85.5	97.2	99.1	0.308	
33.	Rovral 4Flo Equus 720 SST	1.0 pt 1.5 pt	Appl 1-6 Appl 7-9	0.6	2.0	2.3	2.6	3.5	6.0	44.5	70.9	85.4	96.5	98.5	0.314	
34.	MANA-iprodione 4FL Equus 720 SST	1.0 pt 1.5 pt	Appl 1-6 Appl 7-9	0.7	1.6	2.2	2.5	3.2	3.9	40.4	64.5	84.1	96.6	98.2	0.299	
35.	Rovral 4Flo Equus 720 SST	2.0 pt 1.5 pt	Appl 1-6 Appl 7-9	0.6	1.2	1.9	2.6	2.5	3.7	22.9	56.4	83.3	95.6	98.7	0.271	
36.	MANA-iprodione 4FL Equus 720 SST	2.0 pt 1.5 pt	Appl 1-6 Appl 7-9	0.7	1.9	2.2	2.8	3.1	3.2	17.3	48.4	77.6	94.4	96.9	0.253	
37.	Rovral 4Flo Equus 720 SST	4.0 pt 1.5 pt	Appl 1-6 Appl 7-9	1.0	1.8	1.9	2.2	2.5	2.9	11.1	43.6	60.5	89.0	95.6	0.219	
38.	MANA-iprodione 4FL Equus 720 SST	4.0 pt 1.5 pt	Appl 1-6 Appl 7-9	0.4	1.2	1.9	2.5	2.3	2.8	14.4	47.7	79.2	93.3	96.0	0.246	
39.	Echo Zn Headline + Echo Zn Endura + Echo Zn Headline + Echo Zn	2.12 pt 6 fl oz 1.5 pt 2.5 oz 1.5 pt 6 fl oz 1.8 pt	Appl 1 3 5 7 8 9 Appl 2 Appl 4 Appl 6	0.9	1.6	1.2	2.3	2.5	3.7	7.9	38.3	55.9	85.5	95.0	0.203	
40.	Echo Zn Headline + Echo Zn Endura + Echo Zn Headline + Echo Zn Cuprofix Disperss Ultra 40DF + Echo Zn	2.12 pt 6 fl oz 1.5 pt 2.5 oz 1.5 pt 6 fl oz 1.8 pt 2.0 lb 1.5 pt	Appl 1 3 5 9 Appl 2 Appl 4 Appl 6 Appl 7 8	0.3	1.3	2.0	2.6	2.8	3.7	15.1	35.0	58.5	82.4	92.7	0.207	
41.	Revus Opti 3.67 SC + NIS 0.125 %v/v Bravo WS 720 SC	2.5 pt 1.5 pt	Appl 1 2 4 5 Appl 3 6-9	0.7	1.8	2.2	2.6	3.2	3.5	33.8	61.4	85.4	97.4	98.7	0.292	
42.	Revus Top 4.17 SC + NIS 0.125 %v/v Bravo WS 720 SC	5.5 fl oz 1.5 pt	Appl 1 2 4 5 Appl 3 6-9	0.9	1.6	1.9	2.2	2.6	2.9	10.8	48.8	72.4	95.6	97.7	0.241	

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				20 Jun	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug	31 Aug		
43.	Revus Top 4.17 SC + NIS 0.125 %v/v	7 fl oz	Appl 1 2 4 5	0.7	1.9	1.9	2.5	2.5	2.5	3.4	14.4	44.1	68.9	93.4	95.9	0.235
44.	Bravo WS 720 SC	1.5 pt	Appl 3 6-9													
	Quadrifis Opti 5.5 SC	1.6 pt	Appl 1 3													
	Revus Top 4.17 SC + NIS 0.125 %v/v	7 fl oz	Appl 2 4													
45.	Bravo WS 720 SC	1.5 pt	Appl 5-9	0.9	1.8	1.6	2.0	2.9	2.9	2.9	10.8	41.4	74.4	95.0	96.8	0.235
	A13703 SC + NIS 0.125 %v/v	8.4 fl oz	Appl 1 2 4 5													
	Bravo WS 720 SC	1.5 pt	Appl 3 6-9	0.9	1.5	2.0	2.3	2.6	2.6	2.6	10.5	37.9	63.5	90.0	96.8	0.217
46.	Bravo WS 720 SC	1.5 pt	Appl 1 3 5 7-9	1.5	1.5	1.9	2.5	2.6	2.6	3.2	9.4	37.0	56.0	71.2	78.1	0.189
	Endura	3.5 oz	Appl 2 4 6													
47.	BmJ	43.75 g	Weekly	0.4	1.6	2.3	2.8	4.4	4.8	4.8	46.9	77.1	92.5	98.2	99.4	0.330
48.	BmJ	43.75 g	Appl 1 3 5 7 9													
	Bravo Zn	2.125 pt	Appl 2 4 6 8	0.7	1.6	1.8	2.6	2.6	3.9	48.4	73.0	88.3	97.4	99.1	0.319	
49.	Headline + BmJ	6 fl oz	Appl 1 3 5													
	Bravo Zn	43.75 g	Appl 2 4 6 7 8 9	0.7	1.9	2.2	2.8	2.6	3.7	17.6	51.2	80.7	94.9	97.7	0.259	
50.	Headline	2.125 pt	Appl 1 3 5													
	Bravo Zn	6 fl oz	Appl 2 4 6 7 8 9	0.6	1.3	2.0	2.8	3.5	3.5	48.4	80.7	93.8	98.5	99.6	0.333	
51.	V-10116-1681 2.00 DC	4 fl oz	Appl 1, 3, 5, 7, 9													
	Bravo Zn	2.125 pt	Appl 2, 4, 6, 8	0.7	1.3	2.5	2.9	3.1	4.8	32.8	65.6	83.0	96.5	98.0	0.293	
52.	V-10116-1585 50 WG	2 oz	Appl 1, 3, 5, 7, 9													
	Bravo Zn	2.125 pt	Appl 2, 4, 6, 8	0.7	1.3	2.6	3.1	3.1	4.5	48.8	77.3	85.2	95.6	98.8	0.321	
53.	V-10116-1681 2.00 DC	6 fl oz	Appl 1, 3, 5, 7, 9													
	Bravo Zn	2.125 pt	Appl 2, 4, 6, 8	0.9	1.8	1.9	2.5	2.5	3.1	16.9	41.2	62.0	86.1	93.7	0.221	
54.	V-10116-1585 50 WG	3 oz	Appl 1, 3, 5, 7, 9													
	Bravo Zn	2.125 pt	Appl 2, 4, 6, 8	1.0	1.8	1.5	2.3	3.5	3.8	19.1	52.7	75.7	94.1	97.8	0.257	
55.	LEM17 070 SC (200 G/L)	10 fl oz	weekly	0.9	1.3	2.2	2.8	2.6	4.1	19.6	59.8	79.3	93.1	97.7	0.266	
56.	Bravo WS	1.5 pt	Appl 1 3 5 7-9													
	Confidential product	13.7 fl oz	Appl 2 4 6	1.2	1.9	1.6	2.6	2.9	4.5	33.0	59.8	83.6	96.5	98.8	0.287	
Pr > F <sup>4</sup>				0.77	0.38	0.06	0.14	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
LSD				NS	NS	NS	NS	1.0	1.8	16.7	22.0	22.0	13.5	10.5	0.060	

1 Dates for regular weekly applications: 1 = 26 Jun; 2 = 3 Jul; 3 = 10 Jul; 4 = 17 Jul; 5 = 24 Jul; 6 = 31 Jul; 7 = 7 Aug; 8 = 14 Aug; 9 = 22 Aug.

2 Severity rated on a Horsfall-Barratt scale of 0 (no infection) to 11 (all foliage and stems dead). Ratings were converted to percentages.

3 Relative area under the disease progress curve. Data for each date were plotted on a graph and the area under the line was calculated for each treatment providing a measure of the relative severity of disease through the season. A rating of 100% severity for the entire season would produce a value of 1.0. All relative AUDPC values are expressed as a proportion of this value.

4 Either decreased disease severity or later disease development will contribute to lower relative AUDPC. AUDPC was calculated from 20 Jun - 31 Aug.

Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated (alpha=0.05). NS = not significant at P = 0.05.

**Table 2. Effect of fungicide treatment on yield and grade of potatoes (Treatment numbers as listed in Table 1).**

Trt no.	Yield				US#1 cwt/A	%	Undersize <sup>1</sup>		Culls		Specific gravity	No. of rotted tubers <sup>2</sup>	Size grades of US#1 potatoes - %				
	Total cwt/A	cwt/A	cwt/A	%			cwt/A	%	< 4 oz	4-6 oz			6-10 oz	10-13 oz	6-13 oz	13-16 oz	>16 oz
1	521.1	428.3	82.1	60.7	11.8	32.2	6.1	1.068	0.3	30.8	38.6	26.4	2.8	29.2	0.5	1.0	
2	581.7	485.5	83.3	59.4	10.3	36.8	6.4	1.073	1.3	28.0	35.6	29.2	5.3	34.5	1.2	0.7	
3	535.0	424.0	79.2	75.0	14.0	36.1	6.8	1.068	0.5	35.6	37.0	22.3	3.5	25.8	1.1	0.4	
4	552.3	459.6	83.2	57.6	10.4	35.1	6.4	1.070	1.5	30.3	34.3	29.0	4.9	33.9	1.2	0.4	
5	569.5	470.2	82.4	67.3	11.9	32.0	5.6	1.071	0.8	31.6	34.0	27.3	5.0	32.3	1.5	0.6	
6	564.0	469.0	83.2	56.2	10.0	38.8	6.8	1.071	0.5	30.6	31.9	29.7	5.7	35.4	1.1	1.0	
7	592.9	486.3	82.0	72.9	12.3	33.6	5.7	1.069	0.5	33.5	32.4	28.1	4.5	32.6	1.2	0.3	
8	555.7	466.3	83.9	57.0	10.3	32.4	5.8	1.069	0.5	29.9	37.4	26.4	4.1	30.5	1.6	0.6	
9	535.3	443.2	82.6	62.5	11.8	29.6	5.6	1.070	0.8	34.3	34.8	26.6	2.8	29.4	1.1	0.4	
10	546.2	442.2	80.9	69.1	12.8	34.9	6.3	1.069	0.3	31.2	38.3	25.3	4.0	29.4	0.9	0.2	
11	612.9	504.3	82.4	57.6	9.2	51.0	8.4	1.071	3.0	28.8	37.4	27.5	4.6	32.0	1.4	0.4	
12	585.9	483.7	82.7	53.0	8.9	49.2	8.4	1.070	2.3	25.7	34.9	30.9	5.8	36.7	1.0	1.7	
13	556.4	464.3	83.4	55.6	9.9	36.5	6.7	1.068	2.5	25.8	36.2	30.5	5.6	36.0	1.7	0.3	
14	596.1	504.5	84.6	56.2	9.2	35.4	6.2	1.072	1.0	27.4	33.4	32.6	4.4	37.0	1.5	0.7	
15	607.2	496.3	81.8	60.8	10.0	50.0	8.2	1.069	3.0	25.7	32.5	34.6	5.1	39.7	1.3	0.8	
16	644.3	541.0	84.0	53.6	8.3	49.7	7.7	1.073	1.3	23.7	26.9	35.1	7.3	42.4	4.5	2.6	
17	605.6	498.1	82.3	65.3	10.8	42.3	7.0	1.072	0.5	23.8	36.3	30.2	5.9	36.0	3.2	0.7	
18	510.7	413.7	80.9	71.4	14.0	25.7	5.1	1.067	0.5	34.9	36.7	23.9	4.3	28.1	0.2	0.1	
19	582.0	489.6	84.1	59.6	10.3	32.8	5.7	1.074	0.3	29.4	36.8	27.7	3.7	31.4	1.4	1.0	
20	578.1	479.5	82.8	64.7	11.4	34.0	5.9	1.071	0.5	29.6	29.7	32.6	5.6	38.2	1.1	1.4	
21	589.2	472.6	80.2	72.4	12.4	44.1	7.4	1.072	1.8	27.6	34.6	29.3	5.9	35.2	1.6	1.0	
22	563.6	468.8	83.2	63.5	11.2	31.3	5.6	1.071	1.5	29.0	34.2	29.8	4.5	34.3	1.8	0.7	
23	573.7	471.4	82.2	68.6	11.9	33.7	5.8	1.069	2.3	26.0	37.0	30.1	5.1	35.3	1.5	0.3	
24	597.3	492.7	82.5	58.3	9.9	46.2	7.6	1.069	2.3	27.6	33.3	29.0	6.8	35.7	2.3	1.1	
25	598.3	503.2	84.1	58.0	9.7	37.1	6.2	1.074	2.0	25.5	32.7	33.6	5.9	39.6	1.7	0.5	
26	603.3	479.3	79.5	63.9	10.8	60.0	9.8	1.072	3.8	26.7	30.9	33.2	6.2	39.4	1.7	1.2	
27	587.8	476.0	80.9	68.9	11.8	42.9	7.3	1.070	1.5	30.2	34.3	28.5	5.2	33.8	1.2	0.6	
28	540.8	446.9	82.5	67.9	12.8	26.0	4.8	1.070	1.3	33.3	35.4	26.1	3.5	29.5	1.2	0.5	
29	577.7	473.9	82.0	71.5	12.4	32.4	5.6	1.070	0.5	28.6	38.3	28.0	3.3	31.3	0.7	1.0	
30	561.6	445.2	79.2	71.5	13.0	45.0	7.8	1.067	0.5	27.3	38.2	28.8	4.0	32.8	1.1	0.7	
31	558.6	464.7	83.2	52.6	9.3	41.3	7.5	1.071	0.8	26.4	36.1	30.8	4.6	35.4	1.3	0.8	
32	556.1	466.6	84.1	56.8	10.0	32.8	5.8	1.070	0.8	29.5	37.0	26.6	5.8	32.4	0.7	0.4	
33	553.1	457.1	82.7	62.7	11.3	33.4	6.0	1.069	0.8	31.3	36.7	26.8	4.4	31.2	0.5	0.3	

Trt no.	Yield				No. of rotted tubers <sup>2</sup>	Specific gravity	Size grades of US#1 potatoes - %									
	US#1		Undersize <sup>1</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	574.3	466.7	81.6	68.9	12.2	38.7	6.1	1.071	0.0	35.1	35.5	25.0	3.3	28.3	0.6	0.5
35	535.5	448.2	83.6	54.5	10.2	32.8	6.2	1.071	0.0	33.4	38.8	22.6	3.7	26.3	1.1	0.4
36	535.8	453.3	84.6	63.5	12.0	19.0	3.5	1.070	0.8	28.0	37.1	28.2	5.0	33.2	1.3	0.4
37	573.2	472.4	82.6	59.1	10.3	41.7	7.1	1.072	0.8	29.6	35.6	29.0	4.2	33.3	1.3	0.3
38	564.5	465.0	82.7	50.9	9.0	48.7	8.3	1.071	1.0	33.7	34.9	25.5	4.1	29.6	0.8	1.0
39	571.4	454.4	79.5	68.4	12.1	48.6	8.4	1.071	1.8	24.0	32.6	33.7	6.2	40.0	2.0	1.4
40	602.3	502.7	83.3	61.3	10.2	38.3	6.5	1.071	0.3	23.6	34.2	32.3	6.8	39.1	1.8	1.3
41	539.5	437.4	81.1	69.5	12.9	32.6	6.0	1.070	1.0	31.8	36.0	26.5	3.8	30.3	1.4	0.4
42	586.1	492.5	84.1	67.3	11.5	26.3	4.5	1.072	0.5	28.5	35.8	27.7	5.7	33.4	1.9	0.3
43	604.9	505.4	83.3	64.3	10.8	35.3	5.9	1.071	0.8	31.2	35.9	27.8	4.4	32.2	0.6	0.2
44	582.9	490.6	84.3	60.3	10.3	31.9	5.4	1.072	1.3	34.4	34.5	25.6	4.0	29.6	1.4	0.0
45	574.7	496.6	86.3	56.1	9.8	22.0	3.9	1.073	0.5	26.7	33.4	30.9	5.9	36.8	2.6	0.5
46	624.8	520.7	83.2	71.9	11.6	32.2	5.2	1.073	1.8	31.5	34.2	26.8	5.9	32.7	1.1	0.5
47	512.5	422.8	82.2	65.3	13.0	24.4	4.8	1.069	0.8	36.4	36.3	24.5	2.4	26.9	0.2	0.1
48	542.3	440.7	81.2	67.2	12.4	34.4	6.4	1.069	1.5	31.8	33.6	27.4	5.6	33.1	1.1	0.4
49	539.3	450.2	83.4	56.8	10.6	32.3	6.0	1.069	0.3	28.3	33.8	28.5	7.5	36.0	1.3	0.5
50	534.1	437.0	81.8	70.1	13.1	26.9	5.1	1.067	0.5	32.1	36.4	26.5	3.8	30.3	0.8	0.4
51	600.1	498.9	83.3	62.3	10.4	38.9	6.3	1.071	0.5	28.2	34.7	29.2	6.2	35.4	0.8	0.9
52	522.6	434.2	83.0	57.9	11.1	30.4	5.9	1.068	0.3	33.1	39.0	22.8	3.6	26.4	1.3	0.3
53	623.9	532.9	85.2	62.8	10.2	28.2	4.6	1.075	0.5	26.8	31.9	30.4	7.0	37.5	2.9	0.9
54	631.7	526.4	83.4	67.9	10.6	37.4	5.9	1.073	1.3	29.1	33.0	31.1	5.1	36.2	1.5	0.2
55	562.3	457.2	81.3	58.8	10.3	46.3	8.3	1.072	1.3	28.2	36.7	28.0	4.8	32.8	1.4	0.9
56	558.1	475.6	85.2	54.6	9.8	27.9	5.0	1.069	1.0	31.8	36.4	26.2	4.5	30.7	0.7	0.4
P>F <sup>3</sup>	<0.01	<0.01	0.57	0.64	0.14	0.17	0.41	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	0.03
LSD	60.8	58.6	NS	NS	NS	NS	NS	0.003	1.8	6.5	5.0	5.6	NS	7.1	1.5	1.0

1. Undersize indicates potatoes < 1 7/8" in diameter.

2. The average number of tubers per treatment with any kind of rot observed during grading.

3. Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated (alpha=0.05). NS = not significant at P = 0.05.

Table 3. Effect of experimental treatment on value per acre. (Treatment numbers as in Table 1)

Trt No.	Cost of chemicals (\$/A) <sup>1</sup>	Gross value of yield (\$/A)		Net value of yield (\$/A) <sup>4</sup>		Effect of treatment on value (\$/A) <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	4683	2420	4683	2420	0	0
2	62	5435	2830	5373	2767	689	347
3	65	4571	2371	4506	2305	-178	-115
4	72	5064	2635	4992	2564	309	290
5	26	5168	2701	5142	2675	459	254
6	129	5207	2732	5077	2603	394	182
7	89	5295	2767	5206	2678	523	258
8	116	5105	2659	4989	2543	305	123
9	---	4735	2513	---	---	---	---
10	---	4860	2503	---	---	---	---
11	89	5623	2925	5534	2836	850	415
12	87	5550	2834	5463	2748	780	327
13	87	5256	2687	5169	2601	486	180
14	97	5649	2945	5552	2847	868	427
15	96	5752	3023	5656	2927	973	390
16	125	6393	3271	6268	3146	1585	726
17	137	5792	2920	5655	2783	971	363
18	84	4440	2299	4355	2215	-328	-206
19	---	5371	2747	---	---	---	---
20	---	5400	2640	---	---	---	---
21	---	5424	2749	---	---	---	---
22	---	5192	2772	---	---	---	---
23	---	5376	2616	---	---	---	---
24	97	5649	2891	5552	2793	869	373
25	103	5739	2973	5636	2870	952	450
26	130	5630	2839	5500	2709	817	289
27	---	5348	2523	---	---	---	---
28	54	4820	2527	4765	2473	82	52
29	44	5262	2683	5218	2638	534	218
30	48	5114	2542	5066	2494	383	74
31	53	5264	2701	5211	2648	528	228
32	51	5134	2675	5083	2623	400	203
33	118	4978	2605	4860	2486	176	-51
34	---	5011	2648	---	---	---	---
35	219	4763	2552	4544	2333	-139	-87
36	---	5012	2456	---	---	---	---
37	420	5241	2696	4821	2276	138	-261
38	---	5023	2584	---	---	---	---
39	74	5421	2681	5347	2607	664	187
40	95	5871	2964	5776	2868	1092	448
41	---	4808	2460	---	---	---	---
42	---	5459	2841	---	---	---	---
43	---	5488	2902	---	---	---	---
44	---	5188	2797	---	---	---	---
45	---	5534	2924	---	---	---	---
46	81	5718	3016	5636	2935	953	515
47	---	4418	2354	---	---	---	---
48	---	4874	2512	---	---	---	---
49	---	5052	2602	---	---	---	---
50	77	4759	2454	4683	2378	-1	-42
51	---	5596	2833	---	---	---	---
52	---	4640	2440	---	---	---	---
53	---	6009	3327	---	---	---	---
54	---	5861	3080	---	---	---	---
55	---	5168	2624	---	---	---	---
56	---	5088	2701	---	---	---	---
P > F <sup>6</sup>	---	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD <sup>6</sup>	---	702	395	737	380	737	380

- 1 Season-long cost of chemicals/A (rate, number of applications and retail cost are included in calculation). Application costs are not included. Typical retail prices used:
- |                                      |                            |                                  |                                 |
|--------------------------------------|----------------------------|----------------------------------|---------------------------------|
| Biotone, \$36.00/gal                 | Endura, \$3.60/oz          | Headline, \$250.00/gal           | Rovral 4 Flowable, \$134.00/gal |
| BravoWS, \$38.75/gal                 | EquusZn, \$23.50/gal       | Kocide3000, \$5.80/lb            | Scala SC, \$1.43/fl oz          |
| BravoZn, \$28.00/gal                 | Equus 720, \$31.50/gal     | Manzate Pro-Stick, \$2.45/lb     | Sonata, \$24.00/gal             |
| Cuprofix Ultra 40 Dispers, \$3.75/lb | Equus WDG, \$4.95/lb       | NIS 100SF, \$18.75/gal           | Super Tin, \$32.00/lb           |
| Dithane DF Rainsield, \$1.95/lb      | Evito 480 SC, \$4.85/fl oz | Quadris 2.08 SC, \$215.00/gal    | Tanos 50WG, \$22.90/lb          |
| Echo Zn, \$23.50/gal                 | Gavel 75 DF, \$5.35/lb     | Quadris Opti 5.5 SC, \$62.75/gal |                                 |
- If ANY component of the treatment was a product with no current retail price, the cost of chemicals was not calculated. Retail price was not available for: A13703 SC, BmJ, JE874SE, LEM17070 SC, LEM17072 EC, MANA iprodione, MicroFlo Chlorothaloniol 6SC, Polyoxin-D 11.3 WDG, Revus Opti 3.67, Revus Top 4.17 SC SC, V10116WG, V10116DC
- 2 Typical 2007 fresh market pricing: 4-6 oz \$10.75/cwt, 6-10 oz \$13.25/cwt, 10-13 oz \$15.00/cwt, >13 oz \$15.00/cwt, < 4 oz and culls \$5.00/cwt.
- 3 Typical 2007 processing contract pricing:
- Base price is \$5.69/cwt for 69% US#1 (4 oz minimum) with specific gravity of 1.078.
  - In the range of 59%-79% US Number 1 shape, there is an increase or decrease of \$.01/cwt for each 1% above or below 69% of the yield. Above 79% there is an increase of \$.015/cwt to a maximum incentive of \$.25/cwt. Below 59% there is a decrease of \$.015/cwt to a maximum penalty of -\$0.25.
  - A premium is paid for > 17% 10 oz or greater. For each 1% above 17% (to a maximum of 36%) > 10 oz the price increases \$0.01/cwt. The price decreases \$0.01/cwt for each 1% below 17%.
  - There is also an increase/decrease of \$.01/cwt for each 1% above/below 35% >7 oz (to a maximum of 52% >7 oz). There is no further penalty if % > 7 oz is less than 18%.
  - There is an adjustment in price/cwt depending on specific gravity: 1.068 or less, -\$0.20; 1.069 -\$.18; 1.070 -\$.16; 1.071 -\$.14; 1.072 -\$.12; 1.073 -\$.10; 1.074 -\$.08; 1.075 -\$.06; 1.076 -\$.04; 1.077 -\$.02; 1.078 -\$.00; 1.079 +\$.02; 1.080 +\$.04; 1.081 +\$.06; 1.082 +\$.08; 1.083 +\$.10; 1.084 +\$.12; 1.085 +\$.14; 1.086 +\$.16; 1.087 +\$.18; 1.088 or greater +\$.20.
  - There is a payment of \$2.00/cwt for processing culls (up to a maximum of 15% of the total by weight).
  - Additional contract adjustments are made for percent bruise free and percent soft rot. We do not have data to calculate these adjustments.
- 4 Net value of yield = gross value minus cost of chemicals applied. If price was unavailable for ANY component of the treatment, net value was not calculated.
- 5 Effect of treatment on value = 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 (alpha=0.05). NS = not significant at P = 0.05

**Table 4. Data ranked according to several disease and yield measurements (Treatments as described in Table 1. Footnotes for all sections of this table are on page 18).**

Sorted by Relative AUDPC (increasing)														
Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
16	0.112	644.3	541.0	1.073	1.3	3271	726	0.203	571.4	454.4	1.071	1.8	2681	187
25	0.159	598.3	503.2	1.074	2.0	2973	450	0.207	602.3	502.7	1.071	0.3	2964	448
14	0.172	596.1	504.5	1.072	1.0	2945	427	0.217	578.1	479.5	1.071	0.5	2640	---
15	0.178	607.2	496.3	1.069	3.0	3023	390	0.217	574.7	496.6	1.073	0.5	2924	---
24	0.182	597.3	492.7	1.069	2.3	2891	373	0.218	585.9	483.7	1.070	2.3	2834	327
11	0.186	612.9	504.3	1.071	3.0	2925	415	0.219	573.2	472.4	1.072	0.8	2696	-261
17	0.188	605.6	498.1	1.072	0.5	2920	363	0.221	623.9	532.9	1.075	0.5	3327	---
26	0.188	603.3	479.3	1.072	3.8	2839	289	0.226	589.2	472.6	1.072	1.8	2749	---
46	0.189	624.8	520.7	1.073	1.8	3016	515	0.226	563.6	468.8	1.071	1.5	2772	---

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
13	0.227	556.4	464.3	1.068	2.5	2687	180
19	0.229	582.0	489.6	1.074	0.3	2747	---
43	0.235	604.9	505.4	1.071	0.8	2902	---
44	0.235	582.9	490.6	1.072	1.3	2797	---
42	0.241	586.1	492.5	1.072	0.5	2841	---
38	0.246	564.5	465.0	1.071	1.0	2584	---
23	0.251	573.7	471.4	1.069	2.3	2616	---
36	0.253	535.8	453.3	1.070	0.8	2456	---
4	0.255	552.3	459.6	1.070	1.5	2635	290
54	0.257	631.7	526.4	1.073	1.3	3080	---
49	0.259	539.3	450.2	1.069	0.3	2602	---
27	0.261	587.8	476.0	1.070	1.5	2523	---
10	0.264	546.2	442.2	1.069	0.3	2503	---
55	0.266	562.3	457.2	1.072	1.3	2624	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
31	0.275	558.6	464.7	1.071	0.8	2701	228
5	0.276	569.5	470.2	1.071	0.8	2701	254
7	0.280	592.9	486.3	1.069	0.5	2767	258
29	0.280	577.7	473.9	1.070	0.5	2683	218
8	0.284	555.7	466.3	1.069	0.5	2659	123

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
56	0.287	558.1	475.6	1.069	1.0	2701	---
2	0.291	581.7	485.5	1.073	1.3	2830	347
41	0.292	539.5	437.4	1.070	1.0	2460	---
51	0.293	600.1	498.9	1.071	0.5	2833	---
6	0.297	564.0	469.0	1.071	0.5	2732	182
30	0.299	561.6	445.2	1.067	0.5	2542	74
34	0.299	574.3	466.7	1.071	0.0	2648	---
28	0.305	540.8	446.9	1.070	1.3	2527	52
32	0.308	556.1	466.6	1.070	0.8	2675	203
33	0.314	553.1	457.1	1.069	0.8	2605	-51
48	0.319	542.3	440.7	1.069	1.5	2512	---
9	0.321	535.3	443.2	1.070	0.8	2513	---
52	0.321	522.6	434.2	1.068	0.3	2440	---
3	0.330	535.0	424.0	1.068	0.5	2371	-115
47	0.330	512.5	422.8	1.069	0.8	2354	---
50	0.333	534.1	437.0	1.067	0.5	2454	-42

1	0.334	521.1	428.3	1.068	0.3	2420	0
18	0.345	510.7	413.7	1.067	0.5	2299	-206
P > F <sup>6</sup>							
< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01							
LSD	0.060	60.8	58.6	0.003	1.8	395	380

**Sorted by total yield (decreasing)**

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
16	0.112	644.3	541.0	1.073	1.3	3271	726
54	0.257	631.7	526.4	1.073	1.3	3080	---
46	0.189	624.8	520.7	1.073	1.8	3016	515
53	0.221	623.9	532.9	1.075	0.5	3327	---
11	0.186	612.9	504.3	1.071	3.0	2925	415
15	0.178	607.2	496.3	1.069	3.0	3023	390
17	0.188	605.6	498.1	1.072	0.5	2920	363
43	0.235	604.9	505.4	1.071	0.8	2902	---
26	0.188	603.3	479.3	1.072	3.8	2839	289

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
40	0.207	602.3	502.7	1.071	0.3	2964	448
51	0.293	600.1	498.9	1.071	0.5	2833	---
25	0.159	598.3	503.2	1.074	2.0	2973	450
24	0.182	597.3	492.7	1.069	2.3	2891	373
14	0.172	596.1	504.5	1.072	1.0	2945	427
7	0.280	592.9	486.3	1.069	0.5	2767	258
21	0.226	589.2	472.6	1.072	1.8	2749	---
27	0.261	587.8	476.0	1.070	1.5	2523	---
42	0.241	586.1	492.5	1.072	0.5	2841	---

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
12	0.218	585.9	483.7	1.070	2.3	2834	327
44	0.235	582.9	490.6	1.072	1.3	2797	---
19	0.229	582.0	489.6	1.074	0.3	2747	---
2	0.291	581.7	485.5	1.073	1.3	2830	347
20	0.217	578.1	479.5	1.071	0.5	2640	---
29	0.280	577.7	473.9	1.070	0.5	2683	218
45	0.217	574.7	496.6	1.073	0.5	2924	---
34	0.299	574.3	466.7	1.071	0.0	2648	---
23	0.251	573.7	471.4	1.069	2.3	2616	---
37	0.219	573.2	472.4	1.072	0.8	2696	-261
39	0.203	571.4	454.4	1.071	1.8	2681	187
5	0.276	569.5	470.2	1.071	0.8	2701	254
38	0.246	564.5	465.0	1.071	1.0	2584	---
6	0.297	564.0	469.0	1.071	0.5	2732	182
22	0.226	563.6	468.8	1.071	1.5	2772	---
55	0.266	562.3	457.2	1.072	1.3	2624	---
30	0.299	561.6	445.2	1.067	0.5	2542	74
31	0.275	558.6	464.7	1.071	0.8	2701	228
56	0.287	558.1	475.6	1.069	1.0	2701	---
13	0.227	556.4	464.3	1.068	2.5	2687	180

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
32	0.308	556.1	466.6	1.070	0.8	2675	203
8	0.284	555.7	466.3	1.069	0.5	2659	123
33	0.314	553.1	457.1	1.069	0.8	2605	-51
4	0.255	552.3	459.6	1.070	1.5	2635	290
10	0.264	546.2	442.2	1.069	0.3	2503	---
48	0.319	542.3	440.7	1.069	1.5	2512	---
28	0.305	540.8	446.9	1.070	1.3	2527	52
41	0.292	539.5	437.4	1.070	1.0	2460	---
49	0.259	539.3	450.2	1.069	0.3	2602	---
36	0.253	535.8	453.3	1.070	0.8	2456	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
9	0.321	535.3	443.2	1.070	0.8	2513	---
3	0.330	535.0	424.0	1.068	0.5	2371	-115
50	0.333	534.1	437.0	1.067	0.5	2454	-42
52	0.321	522.6	434.2	1.068	0.3	2440	---
1	0.334	521.1	428.3	1.068	0.3	2420	0
47	0.330	512.5	422.8	1.069	0.8	2354	---
18	0.345	510.7	413.7	1.067	0.5	2299	-206
P > F <sup>6</sup>	0.060	60.8	58.6	0.003	1.8	395	380
LSD	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

**Sorted by yield US#1 tubers (decreasing)**

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
16	0.112	644.3	541.0	1.073	1.3	3271	726
53	0.221	623.9	532.9	1.075	0.5	3327	---
54	0.257	631.7	526.4	1.073	1.3	3080	---
46	0.189	624.8	520.7	1.073	1.8	3016	515
43	0.235	604.9	505.4	1.071	0.8	2902	---
14	0.172	596.1	504.5	1.072	1.0	2945	427
11	0.186	612.9	504.3	1.071	3.0	2925	415
25	0.159	598.3	503.2	1.074	2.0	2973	450
40	0.207	602.3	502.7	1.071	0.3	2964	448

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
51	0.293	600.1	498.9	1.071	0.5	2833	---
17	0.188	605.6	498.1	1.072	0.5	2920	363
45	0.217	574.7	496.6	1.073	0.5	2924	---
15	0.178	607.2	496.3	1.069	3.0	3023	390
24	0.182	597.3	492.7	1.069	2.3	2891	373
42	0.241	586.1	492.5	1.072	0.5	2841	---
44	0.235	582.9	490.6	1.072	1.3	2797	---
19	0.229	582.0	489.6	1.074	0.3	2747	---
7	0.280	592.9	486.3	1.069	0.5	2767	258

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
2	0.291	581.7	485.5	1.073	1.3	2830	347
12	0.218	585.9	483.7	1.070	2.3	2834	327
20	0.217	578.1	479.5	1.071	0.5	2640	---
26	0.188	603.3	479.3	1.072	3.8	2839	289
27	0.261	587.8	476.0	1.070	1.5	2523	---
56	0.287	558.1	475.6	1.069	1.0	2701	---
29	0.280	577.7	473.9	1.070	0.5	2683	218
21	0.226	589.2	472.6	1.072	1.8	2749	---
37	0.219	573.2	472.4	1.072	0.8	2696	-261
23	0.251	573.7	471.4	1.069	2.3	2616	---
5	0.276	569.5	470.2	1.071	0.8	2701	254
6	0.297	564.0	469.0	1.071	0.5	2732	182
22	0.226	563.6	468.8	1.071	1.5	2772	---
34	0.299	574.3	466.7	1.071	0.0	2648	---
32	0.308	556.1	466.6	1.070	0.8	2675	203
8	0.284	555.7	466.3	1.069	0.5	2659	123
38	0.246	564.5	465.0	1.071	1.0	2584	---
31	0.275	558.6	464.7	1.071	0.8	2701	228
13	0.227	556.4	464.3	1.068	2.5	2687	180
4	0.255	552.3	459.6	1.070	1.5	2635	290

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
55	0.266	562.3	457.2	1.072	1.3	2624	---
33	0.314	553.1	457.1	1.069	0.8	2605	-51
39	0.203	571.4	454.4	1.071	1.8	2681	187
36	0.253	535.8	453.3	1.070	0.8	2456	---
49	0.259	539.3	450.2	1.069	0.3	2602	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
28	0.305	540.8	446.9	1.070	1.3	2527	52
30	0.299	561.6	445.2	1.067	0.5	2542	74
9	0.321	535.3	443.2	1.070	0.8	2513	---
10	0.264	546.2	442.2	1.069	0.3	2503	---
48	0.319	542.3	440.7	1.069	1.5	2512	---
41	0.292	539.5	437.4	1.070	1.0	2460	---
50	0.333	534.1	437.0	1.067	0.5	2454	-42
52	0.321	522.6	434.2	1.068	0.3	2440	---
1	0.334	521.1	428.3	1.068	0.3	2420	0
3	0.330	535.0	424.0	1.068	0.5	2371	-115
47	0.330	512.5	422.8	1.069	0.8	2354	---
18	0.345	510.7	413.7	1.067	0.5	2299	-206
P > F <sup>6</sup>	0.060	60.8	58.6	0.003	1.8	395	380
LSD	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

*Sorted by specific gravity (decreasing)*

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
53	0.221	623.9	532.9	1.075	0.5	3327	---
19	0.229	582.0	489.6	1.074	0.3	2747	---
25	0.159	598.3	503.2	1.074	2.0	2973	450
2	0.291	581.7	485.5	1.073	1.3	2830	347
16	0.112	644.3	541.0	1.073	1.3	3271	726
45	0.217	574.7	496.6	1.073	0.5	2924	---
46	0.189	624.8	520.7	1.073	1.8	3016	515
54	0.257	631.7	526.4	1.073	1.3	3080	---
14	0.172	596.1	504.5	1.072	1.0	2945	427
17	0.188	605.6	498.1	1.072	0.5	2920	363
21	0.226	589.2	472.6	1.072	1.8	2749	---
26	0.188	603.3	479.3	1.072	3.8	2839	289
37	0.219	573.2	472.4	1.072	0.8	2696	-261
42	0.241	586.1	492.5	1.072	0.5	2841	---
44	0.235	582.9	490.6	1.072	1.3	2797	---
55	0.266	562.3	457.2	1.072	1.3	2624	---
5	0.276	569.5	470.2	1.071	0.8	2701	254
6	0.297	564.0	469.0	1.071	0.5	2732	182

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
11	0.186	612.9	504.3	1.071	3.0	2925	415
20	0.217	578.1	479.5	1.071	0.5	2640	---
22	0.226	563.6	468.8	1.071	1.5	2772	---
31	0.275	558.6	464.7	1.071	0.8	2701	228
34	0.299	574.3	466.7	1.071	0.0	2648	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
38	0.246	564.5	465.0	1.071	1.0	2584	---
39	0.203	571.4	454.4	1.071	1.8	2681	187
40	0.207	602.3	502.7	1.071	0.3	2964	448
43	0.235	604.9	505.4	1.071	0.8	2902	---
51	0.293	600.1	498.9	1.071	0.5	2833	---
4	0.255	552.3	459.6	1.070	1.5	2635	290
9	0.321	535.3	443.2	1.070	0.8	2513	---
12	0.218	585.9	483.7	1.070	2.3	2834	327
27	0.261	587.8	476.0	1.070	1.5	2523	---
28	0.305	540.8	446.9	1.070	1.3	2527	52
29	0.280	577.7	473.9	1.070	0.5	2683	218
32	0.308	556.1	466.6	1.070	0.8	2675	203
36	0.253	535.8	453.3	1.070	0.8	2456	---
41	0.292	539.5	437.4	1.070	1.0	2460	---
1	0.334	521.1	428.3	1.068	0.3	2420	0
3	0.330	535.0	424.0	1.068	0.5	2371	-115
13	0.227	556.4	464.3	1.068	2.5	2687	180
52	0.321	522.6	434.2	1.068	0.3	2440	---
18	0.345	510.7	413.7	1.067	0.5	2299	-206
30	0.299	561.6	445.2	1.067	0.5	2542	74
50	0.333	534.1	437.0	1.067	0.5	2454	-42
P > F <sup>6</sup>	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD	0.060	60.8	58.6	0.003	1.8	395	380

**Sorted by number of rotted tubers (increasing)**

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
34	0.299	574.3	466.7	1.071	0.0	2648	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
1	0.334	521.1	428.3	1.068	0.3	2420	0
10	0.264	546.2	442.2	1.069	0.3	2503	---
19	0.229	582.0	489.6	1.074	0.3	2747	---
40	0.207	602.3	502.7	1.071	0.3	2964	448
49	0.259	539.3	450.2	1.069	0.3	2602	---
52	0.321	522.6	434.2	1.068	0.3	2440	---
3	0.330	535.0	424.0	1.068	0.5	2371	-115
6	0.297	564.0	469.0	1.071	0.5	2732	182
7	0.280	592.9	486.3	1.069	0.5	2767	258
8	0.284	555.7	466.3	1.069	0.5	2659	123
17	0.188	605.6	498.1	1.072	0.5	2920	363
18	0.345	510.7	413.7	1.067	0.5	2299	-206
20	0.217	578.1	479.5	1.071	0.5	2640	---
29	0.280	577.7	473.9	1.070	0.5	2683	218
30	0.299	561.6	445.2	1.067	0.5	2542	74
42	0.241	586.1	492.5	1.072	0.5	2841	---

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
7	0.280	592.9	486.3	1.069	0.5	2767	258
8	0.284	555.7	466.3	1.069	0.5	2659	123
10	0.264	546.2	442.2	1.069	0.3	2503	---
15	0.178	607.2	496.3	1.069	3.0	3023	390
23	0.251	573.7	471.4	1.069	2.3	2616	---
24	0.182	597.3	492.7	1.069	2.3	2891	373
33	0.314	553.1	457.1	1.069	0.8	2605	-51
47	0.330	512.5	422.8	1.069	0.8	2354	---
48	0.319	542.3	440.7	1.069	1.5	2512	---
49	0.259	539.3	450.2	1.069	0.3	2602	---
56	0.287	558.1	475.6	1.069	1.0	2701	---
1	0.334	521.1	428.3	1.068	0.3	2420	0
3	0.330	535.0	424.0	1.068	0.5	2371	-115
13	0.227	556.4	464.3	1.068	2.5	2687	180
52	0.321	522.6	434.2	1.068	0.3	2440	---
18	0.345	510.7	413.7	1.067	0.5	2299	-206
30	0.299	561.6	445.2	1.067	0.5	2542	74
50	0.333	534.1	437.0	1.067	0.5	2454	-42
P > F <sup>6</sup>	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD	0.060	60.8	58.6	0.003	1.8	395	380

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>	
44	0.235	582.9	490.6	1.072	1.3	2797	---	
54	0.257	631.7	526.4	1.073	1.3	3080	---	
55	0.266	562.3	457.2	1.072	1.3	2624	---	
4	0.255	552.3	459.6	1.070	1.5	2635	290	
22	0.226	563.6	468.8	1.071	1.5	2772	---	
27	0.261	587.8	476.0	1.070	1.5	2523	---	
48	0.319	542.3	440.7	1.069	1.5	2512	---	
21	0.226	589.2	472.6	1.072	1.8	2749	---	
39	0.203	571.4	454.4	1.071	1.8	2681	187	
46	0.189	624.8	520.7	1.073	1.8	3016	515	
25	0.159	598.3	503.2	1.074	2.0	2973	450	
12	0.218	585.9	483.7	1.070	2.3	2834	327	
23	0.251	573.7	471.4	1.069	2.3	2616	---	
24	0.182	597.3	492.7	1.069	2.3	2891	373	
13	0.227	556.4	464.3	1.068	2.5	2687	180	
11	0.186	612.9	504.3	1.071	3.0	2925	415	
15	0.178	607.2	496.3	1.069	3.0	3023	390	
26	0.188	603.3	479.3	1.072	3.8	2839	289	
P > F <sup>6</sup>							<0.01	<0.01
LSD							0.060	58.6
							0.003	395
							1.8	380

Sorted by gross processing value (\$/A, decreasing)

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
45	0.217	574.7	496.6	1.073	0.5	2924	---
17	0.188	605.6	498.1	1.072	0.5	2920	363
43	0.235	604.9	505.4	1.071	0.8	2902	---
24	0.182	597.3	492.7	1.069	2.3	2891	373
42	0.241	586.1	492.5	1.072	0.5	2841	---
26	0.188	603.3	479.3	1.072	3.8	2839	289
12	0.218	585.9	483.7	1.070	2.3	2834	327
51	0.293	600.1	498.9	1.071	0.5	2833	---
2	0.291	581.7	485.5	1.073	1.3	2830	347
16	0.112	644.3	541.0	1.073	1.3	2830	---
28	0.305	540.8	446.9	1.070	1.3	2527	52

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
45	0.217	574.7	496.6	1.073	0.5	2924	---
50	0.333	534.1	437.0	1.067	0.5	2454	-42
51	0.293	600.1	498.9	1.071	0.5	2833	---
53	0.221	623.9	532.9	1.075	0.5	3327	---
5	0.276	569.5	470.2	1.071	0.8	2701	254
9	0.321	535.3	443.2	1.070	0.8	2513	---
31	0.275	558.6	464.7	1.071	0.8	2701	228
32	0.308	556.1	466.6	1.070	0.8	2675	203
33	0.314	553.1	457.1	1.069	0.8	2605	-51
36	0.253	535.8	453.3	1.070	0.8	2456	---
37	0.219	573.2	472.4	1.072	0.8	2696	-261
43	0.235	604.9	505.4	1.071	0.8	2902	---
47	0.330	512.5	422.8	1.069	0.8	2354	---
14	0.172	596.1	504.5	1.072	1.0	2945	427
38	0.246	564.5	465.0	1.071	1.0	2584	---
41	0.292	539.5	437.4	1.070	1.0	2460	---
56	0.287	558.1	475.6	1.069	1.0	2701	---
2	0.291	581.7	485.5	1.073	1.3	2830	347
16	0.112	644.3	541.0	1.073	1.3	3271	726
28	0.305	540.8	446.9	1.070	1.3	2527	52

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
44	0.235	582.9	490.6	1.072	1.3	2797	---
22	0.226	563.6	468.8	1.071	1.5	2772	---
7	0.280	592.9	486.3	1.069	0.5	2767	258
21	0.226	589.2	472.6	1.072	1.8	2749	---
19	0.229	582.0	489.6	1.074	0.3	2747	---
6	0.297	564.0	469.0	1.071	0.5	2732	182
5	0.276	569.5	470.2	1.071	0.8	2701	254
31	0.275	558.6	464.7	1.071	0.8	2701	228
56	0.287	558.1	475.6	1.069	1.0	2701	---
37	0.219	573.2	472.4	1.072	0.8	2696	-261
13	0.227	556.4	464.3	1.068	2.5	2687	180
29	0.280	577.7	473.9	1.070	0.5	2683	218
39	0.203	571.4	454.4	1.071	1.8	2681	187
32	0.308	556.1	466.6	1.070	0.8	2675	203
8	0.284	555.7	466.3	1.069	0.5	2659	123
34	0.299	574.3	466.7	1.071	0.0	2648	---
20	0.217	578.1	479.5	1.071	0.5	2640	---
4	0.255	552.3	459.6	1.070	1.5	2635	290
55	0.266	562.3	457.2	1.072	1.3	2624	---
23	0.251	573.7	471.4	1.069	2.3	2616	---

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
33	0.314	553.1	457.1	1.069	0.8	2605	-51
49	0.259	539.3	450.2	1.069	0.3	2602	---
38	0.246	564.5	465.0	1.071	1.0	2584	---
35	0.271	535.5	448.2	1.071	0.0	2552	-87
30	0.299	561.6	445.2	1.067	0.5	2542	74
28	0.305	540.8	446.9	1.070	1.3	2527	52
27	0.261	587.8	476.0	1.070	1.5	2523	---
9	0.321	535.3	443.2	1.070	0.8	2513	---
48	0.319	542.3	440.7	1.069	1.5	2512	---
10	0.264	546.2	442.2	1.069	0.3	2503	---
41	0.292	539.5	437.4	1.070	1.0	2460	---
36	0.253	535.8	453.3	1.070	0.8	2456	---
50	0.333	534.1	437.0	1.067	0.5	2454	-42
52	0.321	522.6	434.2	1.068	0.3	2440	---
1	0.334	521.1	428.3	1.068	0.3	2420	0
3	0.330	535.0	424.0	1.068	0.5	2371	-115
47	0.330	512.5	422.8	1.069	0.8	2354	---
18	0.345	510.7	413.7	1.067	0.5	2299	-206
P > F <sup>6</sup>	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD	0.060	60.8	58.6	0.003	1.8	395	380

*Sorted by effect of treatment on processing value (\$/A, decreasing)*

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
16	0.112	644.3	541.0	1.073	1.3	3271	726
46	0.189	624.8	520.7	1.073	1.8	3016	515
25	0.159	598.3	503.2	1.074	2.0	2973	450
40	0.207	602.3	502.7	1.071	0.3	2964	448
14	0.172	596.1	504.5	1.072	1.0	2945	427
11	0.186	612.9	504.3	1.071	3.0	2925	415
15	0.178	607.2	496.3	1.069	3.0	3023	390
24	0.182	597.3	492.7	1.069	2.3	2891	373

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
17	0.188	605.6	498.1	1.072	0.5	2920	363
2	0.291	581.7	485.5	1.073	1.3	2830	347
12	0.218	585.9	483.7	1.070	2.3	2834	327
4	0.255	552.3	459.6	1.070	1.5	2635	290
26	0.188	603.3	479.3	1.072	3.8	2839	289
7	0.280	592.9	486.3	1.069	0.5	2767	258
5	0.276	569.5	470.2	1.071	0.8	2701	254
31	0.275	558.6	464.7	1.071	0.8	2701	228

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
29	0.280	577.7	473.9	1.070	0.5	2683	218
32	0.308	556.1	466.6	1.070	0.8	2675	203
39	0.203	571.4	454.4	1.071	1.8	2681	187
6	0.297	564.0	469.0	1.071	0.5	2732	182
13	0.227	556.4	464.3	1.068	2.5	2687	180
8	0.284	555.7	466.3	1.069	0.5	2659	123
30	0.299	561.6	445.2	1.067	0.5	2542	74
28	0.305	540.8	446.9	1.070	1.3	2527	52
1	0.334	521.1	428.3	1.068	0.3	2420	0

Trt no.	Relative AUDPC <sup>1</sup>	Total cwt/A	US#1 cwt/A <sup>2</sup>	Specific gravity	No. of rotted tubers	Gross processing value (\$/A) <sup>3</sup>	Effect of treatment on processing value (\$/A) <sup>3</sup>
50	0.333	534.1	437.0	1.067	0.5	2454	-42
33	0.314	553.1	457.1	1.069	0.8	2605	-51
35	0.271	535.5	448.2	1.071	0.0	2552	-87
3	0.330	535.0	424.0	1.068	0.5	2371	-115
18	0.345	510.7	413.7	1.067	0.5	2299	-206
37	0.219	573.2	472.4	1.072	0.8	2696	-261
P > F <sup>6</sup>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
LSD	0.060	60.8	58.6	0.003	1.8	395	380

1. Relative area under the disease progress curve. Data for each date were plotted on a graph and the area under the line was calculated for each treatment providing a measure of the relative severity of disease through the season. A rating of 100% severity for the entire season would produce a value of 1.0. All relative AUDPC values are expressed as a proportion of this value. Either decreased disease severity or later disease development will contribute to lower relative AUDPC. AUDPC was calculated from 20 Jun – 6 Sep.
2. Excludes undersize (potatoes < 1 7/8" in diameter) and culls (rotted, severely misshapen or green).
3. See **Table 3** for complete information about value calculations. Gross processing value was calculated for all treatments. The effect of treatment on value was calculated for treatments where all components had a known retail price. If **ANY** component of the treatment was an experimental product with no retail price, the cost of chemicals was not calculated. Net value of yield = gross value minus cost of chemicals applied (shown in Table 3). If price was unavailable for ANY component of the treatment, net value was not calculated. Effect of treatment on value = Net value for the treatment minus net value of the untreated control.
4. Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated (alpha=0.05).