

WRS359 – Antigo Quadris Trial, 2000

Table 1. Hancock Seedpiece/Furrow Treatment Trial, 2000 - Effect of treatment on yield and quality after storage.

	Total Yield (cwt/A)	US#1		Undersize		Cull		% of tubers with:					Silver scurf index ³	Rhizoc-tonia index ⁴		
		cwt/A	%	cwt/A	%	cwt/A	%	No symp-toms	Late blight	Soft rot	Pink rot	Silver scurf ONLY			Rhizoc-tonia ONLY	Early blight
ATL Q	355.2	286.7	80.8	15.3	4.2	53.3	15.0	68.4	0.0	0.0	0.0	31.6	8.4	13.9	21.3	28.4
ATL S	306.8	215.2	70.4	15.7	5.1	76.0	24.5	71.6	0.0	0.0	0.0	27.5	19.3	0.0	22.8	28.4
Pr>F	0.45	0.23	0.14	0.90	0.24	0.31	0.13	0.79	---	---	---	0.73	0.15	0.39	0.80	1.0
LSD	NS	NS	NS	NS	NS	NS	NS	NS	---	---	---	NS	NS	NS	NS	NS
DRN Q	308.1	265.2	85.6	18.9	6.4	24.0	7.9	94.0	0.0	0.0	0.0	6.0	0.0	0.0	6.5	0.0
DRN S	322.4	280.2	87.0	17.2	5.3	25.0	7.7	95.0	0.0	0.0	0.0	5.0	0.0	0.0	4.8	0.0
Pr>F	0.65	0.61	0.28	0.20	0.24	0.79	0.79	0.69	---	---	---	0.69	---	---	0.38	---
LSD	NS	NS	NS	NS	NS	NS	NS	NS	---	---	---	NS	---	---	NS	---
RBK Q	355.7	259.3	72.5	31.7	8.9	64.8	18.6	79.2	0.0	0.0	0.0	20.4	0.5	0.4	17.8	0.9
RBK S	313.1	226.2	72.4	33.3	10.6	53.6	17.0	79.4	0.0	0.3	0.0	20.3	1.8	0.0	23.5	0.9
Pr>F	0.55	0.59	0.99	0.85	0.22	0.30	0.67	0.98	---	0.39	---	0.99	0.33	0.39	0.52	---
LSD	NS	NS	NS	NS	NS	NS	NS	NS	---	NS	---	NS	NS	NS	NS	---
SNO Q	362.6	314.4	86.8	28.0	7.7	20.1	5.6	83.8	0.0	0.0	0.0	16.0	3.9	0.0	19.3	6.9
SNO S	287.7	222.1	77.1	30.1	10.4	35.5	12.5	74.6	0.0	0.2	0.0	25.2	12.4	0.0	37.5	23.8
Pr>F	0.11	0.08	0.12	0.79	0.19	0.19	0.11	0.17	---	0.39	---	0.17	0.29	---	0.13	0.31
LSD	NS	110.7*	NS	NS	NS	NS	NS	NS	---	NS	---	NS	NS	---	NS	NS

1 Silver scurf index: Tubers were spread out and the % of the top surface area with silver scurf symptoms was rated on a 5 point scale with 0 = none; 1 = 1-10% of the surface area of the tuber affected; 2 = 10-25% affected; 3 = 25-50% affected; 4 = 50-75% affected; 5 = > 75% affected. The lesion area index was calculated by summing the number in each class times the class number / 5 times the total number of tubers rated. The index represents a percentage of the worst possible case (if all tubers were rated 5, the index would = 100).

2 Rhizoctonia index: Tubers were spread out and the severity of Rhizoctonia symptoms on the top surface was rated on a 5 point scale with 0 = none; 1 = 1-5 sclerotia; 2 = 5-10 sclerotia; 3 = 10-20 sclerotia; 4 = > 20 sclerotia. The Rhizoctonia index was calculated by summing the number in each class times the class number / 4 times the total number of tubers rated. The index represents a percentage of the worst possible case (if all tubers were rated 4, the index would = 100).

3 Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated. NS = not significant at P = 0.10.

Table 2. Hancock Seedpiece/Furrow Treatment Trial, 2000 – Effect of treatment on internal quality of stored tubers (treatment numbers as listed in table 1).

trt	% with no internal defects	% with any kind of internal defect	Com- bined Defect Rating ¹	Hollow Heart ²				Internal Browning ²				Black Spot/Bruising					
				% with ANY HH	% with SLIGHT HH	% MODER- ATE HH	% SEVERE HH	% with ANY IB	% with SLIGHT IB	% MODER- ATE IB	% SEVERE IB	% Bruise Free	% with 1 spot (< 1cm)	% with 1 spot (> 1cm)	% with 2-3 spots	% with > 3 spots	
atl q	65.0	35.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.0	35.0	0.0	0.0	0.0
atl s	68.2	31.8	0.5	4.5	2.3	2.3	0.0	4.8	2.5	2.3	0.0	73.0	22.0	0.0	5.0	0.0	
Pr>F ³	0.86	0.86	0.26	0.39	0.39	0.39	---	0.18	0.39	0.39	---	0.66	0.48	---	0.18	---	
LSD	NS	NS	NS	NS	NS	NS	---	NS	NS	NS	---	NS	NS	---	NS	---	
drn q	77.5	22.5	0.3	0.0	0.0	0.0	0.0	2.5	0.0	2.5	0.0	80.0	20.0	0.0	0.0	0.0	
drn s	80.0	20.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	20.0	0.0	0.0	0.0	
Pr>F ³	0.64	0.64	0.18	---	---	---	---	0.39	---	0.39	---	1.0	1.0	---	---	---	
LSD	NS	NS	NS	---	---	---	---	NS	---	NS	---	NS	NS	---	---	---	
rbk q	72.5	27.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.5	22.5	0.0	5.0	0.0	
rbk s	67.5	32.5	0.4	0.0	0.0	0.0	0.0	5.0	2.5	2.5	0.0	72.5	25.0	2.5	0.0	0.0	
Pr>F ³	0.79	0.79	1.0	---	---	---	---	0.39	0.39	0.39	---	1.0	0.92	0.39	0.18	---	
LSD	NS	NS	NS	---	---	---	---	NS	NS	NS	---	NS	NS	NS	NS	---	
sno q	70.0	30.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	22.5	2.5	5.0	0.0	
sno s	85.5	14.5	0.2	0.0	0.0	0.0	0.0	2.5	2.5	0.0	0.0	92.5	5.0	0.0	2.5	0.0	
Pr>F ³	0.17	0.17	0.01	---	---	---	---	0.39	0.39	---	---	0.04	0.19	0.39	0.39	---	
LSD	NS	NS	0.2	---	---	---	---	NS	NS	---	---	20.0	NS	NS	NS	---	

1 The worst possible rating would be 10. Hollow heart and internal browning categories given values of 1 (slight), 2 (moderate), 3 (severe); bruising categories given values of 1 (1 spot<1cm) to 4 (> 3 spots). Combined defect rating = sum of Hollow heart, int. browning and bruising values//10 (the worst defect value a tuber could have if hh=3, ib=3 and bruise=4).

2 Hollow heart and internal browning evaluation: slight – longest dimension < 1 cm; moderate 1-2 cm; severe > 2cm.

3 Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated. NS = not significant at P = 0.10.