

Evaluation of potato cultivars and breeding selections for resistance to common scab – Antigo, 2008.

Table 1. Emergence, yield and evaluation of scab symptoms on potato cultivars and breeding lines.

Cultivar or breeding line ¹	% of plants emerged		Lesion area index ²	Lesion type index ³	% of tubers with no scab symptoms	Yield						
	10 Jun	30 Jun				Total yield cwt/A	US#1		Undersize ⁴		Culls	
							cwt/A	%	cwt/A	%	cwt/A	%
Norland (com)	85.0	93.8	8.7	25.7	57.0	108.7	90.2	82.5	16.5	15.5	2.0	1.9
R.Burbank (com)	62.5	80.0	20.6	59.7	5.4	152.6	101.5	56.0	19.8	13.4	31.4	30.6
Snowden (com)	86.3	97.5	17.5	56.0	18.8	158.6	115.1	71.1	22.7	15.0	20.9	13.9
AC97521-1R/Y (CSU)	77.5	93.8	21.6	62.1	5.6	194.2	155.7	80.4	19.1	10.1	19.4	9.6
CO97226-2R/R (CSU)	46.3	68.8	18.1	47.8	13.4	51.0	30.1	61.6	19.4	36.3	1.5	2.1
CO97232-2R/Y (CSU)	55.0	72.5	9.8	25.4	60.0	113.1	94.2	83.9	15.2	12.8	3.6	3.3
CO97232-1R/Y (CSU)	70.0	80.0	26.5	66.0	3.1	94.9	55.2	60.7	24.7	24.4	15.1	15.0
CO97233-3R/Y (CSU)	65.0	80.0	16.2	36.8	38.8	177.0	148.3	81.8	19.2	10.5	9.4	7.7
CO96141-4W (CSU)	72.5	90.0	23.8	58.5	15.0	140.5	97.5	66.3	12.3	8.6	30.7	25.1
CO97043-14W (CSU)	63.8	73.8	16.3	64.9	23.1	145.0	57.7	40.5	10.3	8.0	77.0	51.6
CO97065-7W (CSU)	82.5	96.3	16.4	57.4	21.3	122.3	78.4	64.0	14.2	12.0	29.8	24.0
A98345-1 (ID)	25.0	60.0	22.7	63.6	2.5	153.4	119.4	76.9	4.2	2.5	29.8	20.6
A96814-65LB (ID)	50.0	85.0	11.3	30.1	50.6	167.9	142.8	84.2	8.9	5.3	16.2	10.5
A00324-1LB (ID)	60.0	85.0	16.3	51.1	23.1	189.3	136.1	71.8	11.8	6.3	41.4	22.0
A02507-2LB (ID)	36.3	81.3	8.9	25.0	59.2	194.0	163.4	79.8	8.9	4.4	21.8	15.8
A95109-1 (ID)	45.0	67.5	2.6	8.8	86.9	121.8	99.3	76.2	12.2	9.6	10.3	14.3
AOA95154-1 (ID)	36.3	72.5	7.8	22.8	62.1	126.3	90.0	68.4	17.4	13.3	18.9	18.4
A0008-1TE (ID)	53.8	82.5	1.0	2.5	95.0	119.4	90.8	75.0	21.4	17.8	7.3	7.2
Yukon Gem (ID)	53.8	66.3	18.5	51.1	18.8	157.0	134.9	85.0	11.6	7.8	10.5	7.1
<i>P</i> > <i>F</i> ⁵	< 0.01	0.43	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LSD	26.2	NS	8.0	16.9	22.1	66.6	59.1	16.7	8.9	5.8	22.6	15.3

1. Source of tubers: com = commercial grower; CSU = David Holm - Colorado State University; ID = Rich Novy USDA/ARS Aberdeen, ID.
2. Lesion area index. Lesions were rated on a 5-point scale with: 0 = no lesions; 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 = the sum for all classes of [(the number of tubers in that class x the class number) x 100]/(5 x total number of tubers rated). The maximum value for this index (if all tubers were rated 5) is 100.
3. Lesion type index. Lesions were rated on a 5-point scale as described in the text. The type lesion index = the sum for all classes of [(the number of tubers in that class x the class number) x 100]/(5 x the total number of tubers rated). The maximum value for this index (if all tubers were rated 5) is 100.
4. Undersize indicates potatoes < 1 7/8 in. diam.
5. Analysis of variance was performed on data, and Fisher's protected least significant difference (LSD) was calculated (alpha=0.05).