



## **Northern New York Agricultural Development Program 2014-2015 Project Report: Breeding Alfalfa Cultivars with Resistance to Alfalfa Snout Beetle**

**Tables 1 and 2: see next pages.**

**Table 1:** First and second production year trial results from an alfalfa trial on Gary Berrus's farm in Lowville New York. The trial entries are alfalfa populations developed for resistance to alfalfa snout beetle and the corresponding unselected populations.

**2013 ASB Trial - Lowville NY**

**Sown May 1, 2013. Used reduce seeding rate 12 grams/package instead of 15 grams/package.**

Alfalfa Population	Alfalfa Pedigree	Yield 9/5/13 *=yields in		2014		2015		Height		2015
		T/A	top group	Total Yield (T/A)	*=yields in top group	Rank	Yield 5/30/15 T/A	% Stand 30-May	3=tall, 1=short 30-May	Rank
Seedway 9558	Seedway 9558 Base	2.05	*	5.03		14	1.79	85	2.3	12
NY0703	Seedway 9558-Asb4	2.09	*	5.86	*	3	1.86	80	2.5	8
Seedway 9558 SBR	Seedway 9558 Asb7	2.11	*	5.86	*	2	2.07	78	2.5	2
NY1202	Seedway 9558 Asb9	2.15	*	5.93	*	1	1.97	88	2.8	5
NY9223	Oneida VR Base	2.05	*	5.12		12	1.96	88	3.0	6
NY1203	Oneida VR Asb9	1.95		5.53	*	5	2.03	88	3.0	3
NY0243	PLH Base	1.80		4.97		15	1.16	50	1.0	16
NY1201	PLH Asb9	1.81		5.36		11	1.68	68	1.3	14
NY0324	MIII Base	2.13	*	5.66	*	4	1.66	78	2.8	15
NY1205	MIII Asb9	1.85		5.48	*	8	1.92	85	3.0	7
NY0326	ReSelect Saranac Base	1.74		5.06		13	1.86	85	3.0	10
NY1207	ReSelect Saranac Asb9	1.85		5.45	*	9	1.82	88	3.0	11
NY9117	NY9117 Base	2.23	*	5.41	*	10	1.98	90	2.8	4
NY1204	NY9117 Asb9	1.95		5.53	*	6	2.13	83	2.8	1
NY0316	Curculio Resistant	2.00	*	5.50	*	7	1.86	78	2.8	9
NY1206	Curculio Asb8	1.93		4.81		16	1.70	78	2.8	13
Avg. of Base Populations		2.00		5.25			1.75	79	2.5	10
Avg. of Selected Populations (cycle 8 or 9)		1.93		5.44			1.89	82	2.6	8
Trial Mean		1.98		5.41			1.84	80	2.6	
F-test		2.57**		2.79 **			2.85 **	2.22 *	8.56 **	
LSD (0.05)		0.25		0.56			0.38	19	0.6	
CV (%)		12.9		9.1			14.7	16.6	16.1	

Dug from reps 6 and 7 in fall 2014. Trial was injured by Brown root rot as well as ASB. Plants severely stressed.

**Table 2:** First production year trial results from an alfalfa trial on Haskell and Tim Yancey's farm in Croghan, New York. The trial entries are alfalfa populations developed for resistance to alfalfa snout beetle and the corresponding unselected populations.

2014 Alfalfa Snout Beetle Resistant Alfalfa Trial Belfort NY Mr. Haskell Yancey The first three replicates had better alfalfa stands than the other three replicates.															
Pedigree	REPS 1,2,3				*=yields		REPS 4,5,6				*=yields		Average		
					in top group	% Stand 8/26/2015					in top group	% Stand 8/26/2015	All Reps Total	Rank	
	5-Jun	23-Jul	Total	Rank			5-Jun	23-Jul	Total	Rank					
	tons/acre						tons/acre						T/A		
Seedway 9558	1.14	1.33	2.45	10	*	92	0.73	0.91	1.64	11		82	2.05	10	
Seedway 9558 SBR	1.35	1.49	2.81	1	*	90	0.86	1.09	1.95	3	*	85	2.38	2	
ASB, Seedway 9558 Asb9	1.19	1.39	2.57	7	*	93	0.81	0.99	1.80	7		87	2.19	6	
ASB, NY1203 Base	0.99	1.24	2.24	15		90	0.58	0.72	1.30	15		73	1.77	15	
ASB, OVR Asb9	0.88	1.17	2.06	16		80	0.50	0.62	1.12	16		72	1.59	16	
ASB, NY1201 Base	1.28	1.33	2.64	3	*	92	0.80	0.92	1.73	8		75	2.18	7	
ASB, PLH Asb9	1.18	1.38	2.57	8	*	92	0.81	1.05	1.85	6	*	82	2.21	5	
ASB, MIII Asb9	0.99	1.39	2.37	12		87	0.65	0.85	1.50	12		85	1.94	13	
ASB, Curculio Asb8	1.10	1.34	2.43	11	*	92	0.66	0.78	1.44	14		72	1.94	12	
ASB cross	1.24	1.35	2.61	5	*	90	0.85	1.07	1.91	4	*	87	2.26	4	
ASB, NY1207 Base	1.20	1.45	2.64	4	*	92	0.71	1.01	1.72	9		85	2.18	8	
ASB, ReSelect Sar Asb9	1.06	1.29	2.35	14		87	0.64	0.85	1.49	13		83	1.92	14	
NY9117	1.24	1.43	2.67	2	*	92	0.93	1.17	2.09	1	*	88	2.38	1	
ASB, 9117 Asb9	1.38	1.25	2.60	6	*	93	0.87	1.12	2.00	2	*	87	2.30	3	
Guardsman II	1.15	1.31	2.46	9	*	88	0.86	1.00	1.86	5	*	82	2.16	9	
N-R-Gee	1.19	1.17	2.36	13		93	0.81	0.90	1.71	10		85	2.04	11	
Trial Mean	1.16	1.33	2.49				0.75	0.94	1.70						
F-test	5.52 **	0.80 NS	2.08 NS				8.99 **	6.57 **	8.11 **						
LSD (0.05)	0.19	0.33	0.43				0.12	0.18	0.28						
CV (%)	9.6	14.8	10.1				9.6	11.1	9.8						
Efficiency	313%	159%	237%				163%	129%	142%						