NDSU Carrington Research Extension Center
2006
Field Pea Seed Quality Evaluation

Trmt.	Variety	Seed Germ.	Accelerated Aging	Stand May 22	Stand May 25	Stand June 7	E. Canopy Density	Canopy Density	Days to Bloom	Days to PM
		%	%	plants ft^{-2}	plants ft^{-2}	plants ft^{-2}				
1	DS Admiral	92	87	3.8	5.1	5.7	84	88	49.8	75.3
2	DS Admiral	66	67	4.7	5.8	5.9	89	95	49.8	74.3
3	DS Admiral	95	80	3.2	5.1	6.0	83	83	49.8	75.3
4	DS Admiral	77	0	0.0	0.4	1.1	3	4	50.8	81.8
5	Integra	95	70	2.9	5.2	5.4	78	91	49.0	75.5
6	Integra	95	95	3.9	6.5	7.2	91	98	47.8	75.0
7	Toledo	94	13	0.9	3.7	4.6	61	69	49.0	77.0
8	Toledo	97	94	2.8	4.9	5.5	80	89	46.8	75.0
9	Eclipse	90	73	2.8	4.3	5.2	73	73	49.0	78.3
10	Eclipse	98	81	3.4	5.2	4.9	79	73	47.5	77.0
11	Eclipse	99	92	3.3	6.1	6.6	86	85	47.8	76.8
	MEAN			2.9	4.7	5.3	73.3	76.8	48.8	76.5
	C.V.%			33.9	15.2	17.3	9.6	13.8	1.0	1.1
	LSD.05			1.4	1.0	1.3	10.2	15.3	0.7	1.2
	LSD.01			1.9	1.4	1.8	13.7	20.6	1.0	1.6
	#REPS			4	4	4	4	4	4	4

Trmt.	Variety	Accel. Aging	Height at Harvest	Lodge at PM	Harvest Ease	Seeds/ Pound	1000 KWT	Test Weight	Seed Yield
		%	cm	0-9	0-9		gms	lbs/bu	bu/ac
1	DS Admiral	87	71	1.0	1.0	1963	231	65.0	57.7
2	DS Admiral	67	76	0.8	0.8	1982	230	65.1	60.6
3	DS Admiral	80	70	0.8	0.8	2024	225	64.9	57.3
4	DS Admiral	0	37	3.5	4.3	1977	231	65.3	15.4
5	Integra	70	72	1.0	1.3	1870	243	63.9	53.6
6	Integra	95	72	0.3	0.3	1912	238	63.7	50.5
7	Toledo	13	60	1.5	1.8	1886	241	63.1	43.6
8	Toledo	94	63	1.3	1.8	1884	241	62.8	54.1
9	Eclipse	73	66	1.3	1.3	1781	255	66.2	60.9
10	Eclipse	81	71	1.0	1.3	1878	242	65.4	65.2
11	Eclipse	92	60	1.3	1.5	1878	242	65.8	62.8
	MEAN		65.1	1.2	1.4	1912	238	64.6	53.8
	C.V.%		11.7	64.5	71.2	4.4	4.1	0.6	9.3
	LSD.05		11.0	1.1	1.5	122	14.1	0.5	7.2
	LSD.01		14.8	1.5	2	164	19	0.7	9.7
	#REPS		4	4	4	4	4	4	4

Planting Date = May 9 ; Harvest Date = August 3 ; Previous Crop = Barley

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		%	%	plants ft^{-2}	plants ft^{-2}				0-9	bu/ac
1	DS Admiral	92	87	3.8	5.7	88	49.8	75.3	1.0	57.7
2	DS Admiral	66	67	4.7	5.9	95	49.8	74.3	0.8	60.6
3	DS Admiral	95	80	3.2	6.0	83	49.8	75.3	0.8	57.3
4	DS Admiral	77	0	0.0	1.1	4	50.8	81.8	4.3	15.4
5	Integra	95	70	2.9	5.4	91	49.0	75.5	1.3	53.6
6	Integra	95	95	3.9	7.2	98	47.8	75.0	0.3	50.5
7	Toledo	94	13	0.9	4.6	69	49.0	77.0	1.8	43.6
8	Toledo	97	94	2.8	5.5	89	46.8	75.0	1.8	54.1
9	Eclipse	90	73	2.8	5.2	73	49.0	78.3	1.3	60.9
10	Eclipse	98	81	3.4	4.9	73	47.5	77.0	1.3	65.2
11	Eclipse	99	92	3.3	6.6	85	47.8	76.8	1.5	62.8
	MEAN			2.9	5.3	76.8	48.8	76.5	1.4	53.8
	C.V.%			33.9	17.3	13.8	1.0	1.1	71.2	9.3
	LSD.05			1.4	1.3	15.3	0.7	1.2	1.5	7.2
	LSD.01			1.9	1.8	20.6	1.0	1.6	2	9.7
	#REPS			4	4	4	4	4	4	4

** Objective was to provide field perspectives of the impact of varied seed accelerated aging scores on stand establishment.
** Situation; A high seed germination does not necessarily correlate to a seed with high vigor as based on accelerated aging.
**** All seeding rates were adjusted based on seed germinations to provide the equivalent of 300,000 PLS per acre.**

** The relative field conditions after planting were favorable hence pea emerged fairly rapidly and with limited stresses.
** Canopy density/vigor notes were 'relative' ratings of percent cover recorded Early (June 2) and Late (June 22).

** Treatments number 4, 5, 7, 9 and 10 are examples of seedlots where lower accelerated aging scores were associated with reduced stands or slower stand establishment.

** Treatments number 4 and 7 are examples of seedlots where lower accelerated aging scores resulted in reduced seed yield.
** Treatment number 9 reflects a trend for lower yield due to the lower accelerated aging score.