

## SUNFLOWER SEEDLING DAYLENGTH RESPONSE

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The reaction of sunflower cultivars arranged in alphabetical order to exposure to either 12- or 16-h daylength in the first 3 weeks after emergence with regard to plant height at flowering and time to flowering after subsequent transplanting to the field. Data are means of two or three replicated split plots each containing about 24 plants. Statistical analysis was conducted separately for each year, comparing cultivar by treatment slices.

Cultivar	Time of screen (year)	Height (cm)		Signif. <sup>z</sup>	Time to flowering (d)			Sensitivity rating <sup>y</sup>
		Short	Long		Short	Long	Signif. <sup>z</sup>	
		day	day		day	day		
Apricot Daisy	2014	119	120		68	64		DN
Big Smile	2009	23	44	*	54	63	**	FSD
Buttercream	2009	143	133	ns	66	63	ns	DN
Chianti	2006	117	128	ns	62	68	ns	DN
Coconut Ice	2012	114	107	ns	64	58	ns	DN
Dafne	2012	70	128	***	53	73	***	FSD
Double Quick								
Orange	2012	153	111	***	84	73	**	FLD
Florenza	2006	114	112	ns	64	65	ns	DN
Frilly	2012	168	116	***	78	67	**	FLD
Full Sun Improved	2006	157	183	ns	69	72	ns	DN
Giant Sungold	2012	170	169	ns	99	97	ns	DN

Gold Rush	2011	100	130	*	58	66	**	FSD
Goldy Double	2012	163	146	ns	89	89	ns	DN
Jua Inca	2014	103	124		56	62		DN
Jua Maya	2014	105	122		56	60		DN
Moonbright	2006	112	167	***	60	75	***	FSD
Music Box	2011	52	65	ns	58	59	ns	DN
Orange Glory	2007	70	117	***	53	73	***	FSD
Orange King	2007	107	145	***	57	71	***	FSD
Peach Passion	2009	68	65	ns	63	62	ns	DN
Premier Lemon	2007	35	80	***	44	62	***	FSD
Premier Light								
Yellow	2006	39	95	***	45	63	***	FSD
Premier Orange	2014	45	93		46	64		FSD
Procut Amber								
Glow	2011	116	123	ns	58	58	ns	DN
Procut Apricot Lite	2007	106	113	ns	62	64	ns	DN
Procut Bicolor	2006	150	123	ns	68	62	ns	DN
Procut Bicolor								
Plus	2011	122	118	ns	68	64	ns	DN
Procut Brilliance	2009	122	118	ns	68	64	ns	DN
Procut Early								
Orange	2007	84	105	ns	52	61	***	FSD
Procut Gold	2011	127	118	ns	60	59	ns	DN
Procut Lemon <sup>x</sup>	all	109	112	ns	62	63	ns	DN
Procut Orange	2007	90	105	ns	55	62	*	FSD
Procut Peach	2006	132	129	ns	62	62	ns	DN
Procut Peach								
Blush	2007	121	121	ns	62	61	ns	DN

Procut Red	2011	158	148	ns	72	72	ns	DN
Procut Red								
Lemon Bicolor	2007	94	98	ns	62	62	ns	DN
Procut White Lite	2007	82	112	***	58	69	***	FSD
Procut Yellow	2007	99	119	ns	58	65	*	FSD
Procut Yellow Lite	2006	123	126	ns	62	62	ns	DN
Ring of Fire	2006	112	109	ns	66	69	ns	DN
Solara	2006	82	136	***	53	71	***	FSD
Sonya	2006	86	90	ns	65	68	ns	DN
Soraya	2006	139	136	ns	79	80	ns	DN
Starburst Gold	2011	142	147	ns	64	64	ns	DN
Starburst								
Panache	2011	135	143	ns	61	63	ns	DN
Strawberry Blonde	2006	161	145	ns	65	63	ns	DN
Sunbright	2006	105	163	***	57	78	***	FSD
Sunbright								
Supreme	2006	83	156	***	52	75	***	FSD
Sunny	2006	101	160	***	56	79	***	FSD
Sunrich Gold	2006	80	143	***	52	67	***	FSD
Sunrich Lemon								
Summer	2009	68	121	***	51	72	***	FSD
Sunrich Orange <sup>x</sup>	all	79	137	***	53	71	***	FSD
Sunrich Orange								
Summer	2006	63	123	***	49	69	***	FSD
Sunrich Summer								
Lemoncello	2014	47	97		48	66		FSD
Tapuz	2009	85	151	***	54	77	***	FSD
Tavor Double	2014	84	121		58	60		DN

Tavor Flash	2014	104	135		59	64		DN
Tavor Orange Joy	2014	59	119		53	67		FSD
Terra Cotta	2009	160	147	ns	83	80	ns	DN
TH 472	2006	60	111	***	48	68	***	FSD
The Joker	2006	163	145	ns	63	61	ns	DN
Tiffany	2014	76	166		50	79		FSD
Tosca	2007	70	111	***	51	68	***	FSD
Valentine	2006	104	113	ns	58	65	ns	DN
Vincent Choice	2012	77	81	ns	47	56	*	FSD
Vincent Fresh	2012	73	87	ns	47	54	ns	DN
Zahav	2009	91	157	***	55	77	***	FSD
Zohar	2009	59	121	***	51	72	***	FSD

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<sup>z</sup> ns, \*, \*\*, \*\*\*, not statistically significant, or significant at the  $P \leq 0.05$ , 0.01, 0.001 level

respectively.

<sup>y</sup>Classification of sunflower cultivars according to their reaction to photoperiod: DN= day neutral; FSD= facultative short day: flowering significantly earlier after short-day than long-day treatment; FLD= facultative long day: flowering significantly earlier after long-day treatment.

<sup>x</sup>Standard cultivars grown each year.