

## North Dakota State University Crop and Pest Report

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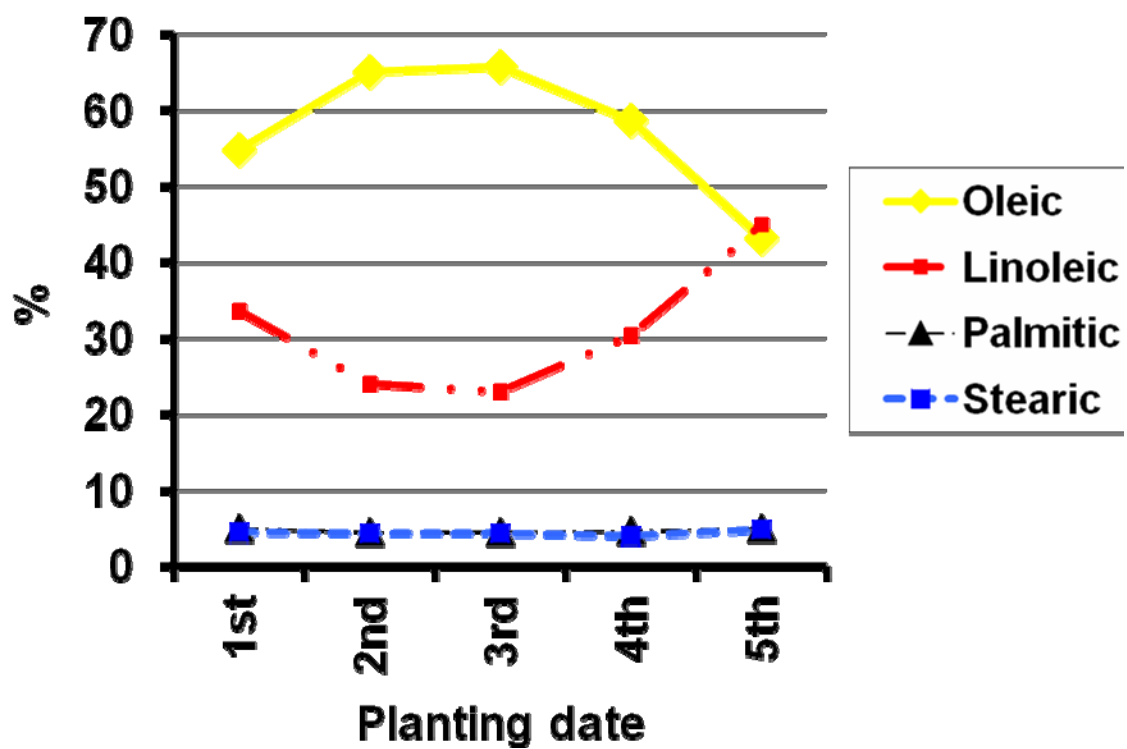
<http://www.ag.ndsu.edu/cpr/pdf-reports/17%20May%202012.pdf/view> Verified May 29, 2013

### Sunflower

#### **Sunflower Date of Planting**

In the northern Great Plains, planting may extend from May 1 until late June. An open warmer winter along with a dry spring has many sunflower producers interested in seeding in early May. Growing conditions during the season will affect yield, oil content and fatty acid composition. High temperatures during seed formation have been identified as the main environmental factor affecting the ratio of linoleic and oleic acid content. Therefore, the optimum planting date will be dependent upon the variety and location, as well as weather conditions during the growing season. Variety genetics also affect oleic content, so select adapted varieties for your area. High yields may be obtained from early planting dates but yields may be reduced by increased pest problems and early season weather problems. Planting too late can result in freeze injury to immature seed and an early snow storm in the fall can bring harvest to a sudden halt. Sunflower planting date studies at Carrington Research Extension Center (<http://www.ag.ndsu.edu/procrop/sun/sunpld05.htm>) showed that planting date occurring during May 20-30 produced the highest seed yields while test weight and percent oil was greatest for sunflower seeded between May 10 and May 20. Planting date studies conducted at the North Central Research Extension Center from 1989-1993 (<http://www.ag.ndsu.edu/procrop/sun/plantn05.htm>) and Langdon Research Extension Center indicate mid-May plantings produced higher yields, test weights and percent oil when compared to early June planting dates. On-farm studies on the Miles Hansen Farm near Bowman, ND, conducted by the Dickinson and Hettinger Research Extension Centers from 1999-2001 (<http://www.ag.ndsu.edu/archive/dickinso/research/2001/agron01j.htm>) indicate the optimum time for sunflower planting is May 20-25. Sunflower yield, test weight, percent oil and oleic acid oil content were highest for the planting date falling within the planting window of May 20-25. Miller, Rehder and Vick in a 2001 study done at the North Dakota Agricultural Experiment Station, Fargo, ND (<https://www.sunflowerusa.com/uploads/research/53/53.pdf>) found oleic acid content was highest for sunflower seeded on 29 May and lowest for 18 May for two sunflower varieties in this trial. Growing Degree Day accumulation from flowering to maturity may influence oleic concentration. What is the optimum date for seeding in your neighborhood? It gets down to weather and variety but what should be evident by now is sunflowers should be in the ground by June 1.

Combined data of the fatty acid profile comparison of Mycogen 8242NS for five planting dates, Miles Hansen Farm, Bowman, ND, 1999-2001. (Ashley, Eriksmoen, Whitney, 2001.)



Planting dates: 1<sup>st</sup> planting date = 25-28 April, 2<sup>nd</sup> planting date = 9-10 May, 3<sup>rd</sup> planting date = 23-24 May, 4<sup>th</sup> planting date = 4-7 June, and 5<sup>th</sup> planting date = 14-20 June.

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