

## Oilseed Stress Trial Study – 2015 summary

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An oilseed stress trial study was conducted 2012-2015 as part of a multi-location evaluation of potential oilseed feedstocks for jet fuel production in the Western U.S. Research sites included Akron, CO; Ames, IA; Mandan, ND; Morris, MN; Moscow, ID; Parlier, CA; Pendleton, OR; Sidney, MT, and Temple, TX. The study included several types of canola, rapeseed, mustard, and camelina crops, with 6 winter varieties and 12 spring varieties:

Type	Genus/Species	Variety
Spring	B. napus	DK3042RR
Spring	B. napus	Zephyr
Spring	B. napus	Gem
Spring	B. napus	InVigor L130
Spring	B. carinata	080814EM
Spring	B. carinata	AAC A110
Spring	B. juncea	Oasis
Spring	B. juncea	Pacific Gold
Spring	C. sativa	CO46
Spring	B. rapa	Eclipse
Spring	S. alba	IdaGold
Spring	S. alba	Tilney
Winter	B. napus	Wichita
Winter	B. napus	Amanda
Winter	B. napus	Durola
Winter	B. napus	Dwarf Essex
Winter	C. sativa	Joelle
Winter	B. rapa	Salut

For the Mandan field site, winter varieties were no-till seeded on September 24, 2014 into winter wheat stubble. The target seeding rate was 920,000 seeds/ac. All of the varieties winter killed, except the Joelle camelina.

All spring variety plots were sprayed on April 24 with Cornerstone (32 oz./a) + Class Act (32 oz./100 gal). Before spring planting, Treflan (10lbs./a) and nitrogen fertilizer (urea 103 lbs. N/a) were broadcast on the surface in separate operations, and then sulfur and starter fertilizer (30 lb/ac S + 50 lbs/a 11-52-0) was applied using a John Deere 750 drill perpendicular to the planting direction to provide some herbicide and urea incorporation.

Spring varieties were no-till seeded on May 5, 2015. Target seeding rate for the spring varieties was 600,000 seeds/ac except for the Oasis and Pacific Gold at 740,000 seeds/ac, and CO46 camelina was seeded at 1.6 million seeds/ac.

Section (8 oz./ac) + Preference (1 qt./100 gal.) was sprayed to Joelle on June 1, and to all spring plots on June 8. The two B. carinata varieties, AAC A110 and 080814EM, had the highest yields (Figure 1). Although the Joelle winter camelina survived, the stand was spotty, and overall yield was much lower than any of the spring varieties.

Weed pressure was relatively high in all varieties as the same weed control management was used for all of the spring types, which greatly limited the herbicides that could be used. Also, poor incorporation of Treflan likely limited effectiveness. This likely led to lower yields for all varieties, but was particularly an issue with varieties that had poor establishment.

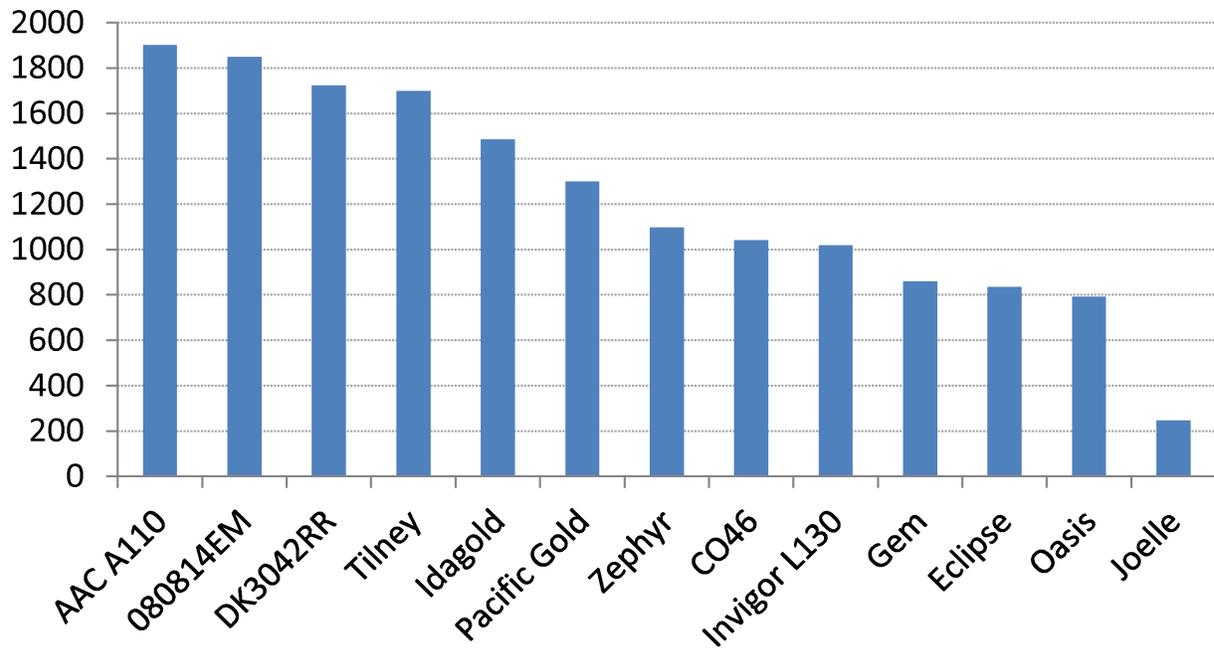


Figure 1. 2015 oilseed yield for the Mandan, ND site.

