

A SUMMARY OF THE INVESTIGATION OF NITROGEN AND SEEDING RATE ON SUNFLOWERS IN A NO-TILL ENVIRONMENT.

Seeding Rate Experiment

Treatments:

- Plot Size: 13x35 ft., 12 inch row spacing
- 7 Seeding rates: 15,000, 20,000, 25,000, 30,000, 35,000, 40,000 and 45,000 plants /acre
- Sunflower hybrid 63A21 and open pollinated cultivar AC Sierra were seeded with an air drill
- Conducted in 2013 and 2014 at Indian Head, Tribune, Redvers, Swift Current and Saskatoon; and in 2015 at Indian Head

Results:

- 63A21 had a higher plant density than AC Sierra when seeded at the same rate
- The cultivar saw a linear decrease in kernel weight as seeding rate increased
- The hybrid saw a curvilinear decrease in kernel weight as seeding rate increased
- Plant height increased as seeding rate increased

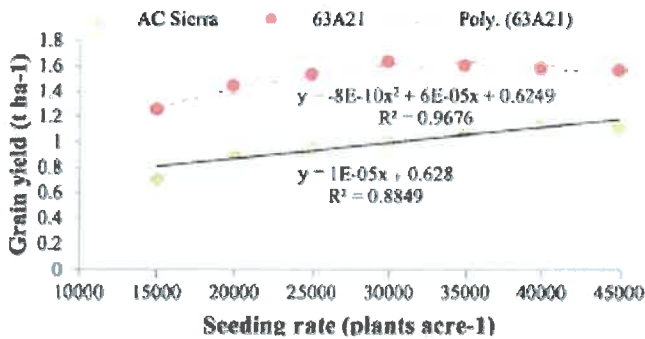


Fig 1. Relationship of Seeding Rate and Average Grain Yield for sunflower hybrid 63A21 and cultivar AC Sierra at several locations across Saskatchewan from 2013 - 2015.

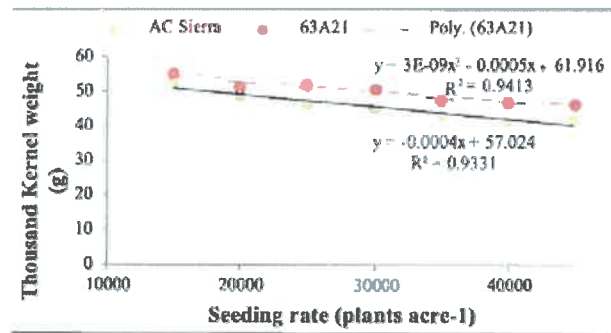


Fig 2. Relationship of Seeding Rate and Average Thousand Kernel Weight for sunflower hybrid 63A21 and cultivar AC Sierra at several locations across Saskatchewan from 2013 – 2015.

CONCLUSIONS:

- Optimum seeding rate for 63A21 is between: 24,000 to 35,000 plants/acre
- Optimum seeding rate for AC Sierra is between: 40,000 to 45,000 plants/acre
- Since yield tended to decrease at seeding rates below 25,000 it is recommended that growers seed at rates above 30,000 plants/acre to insure that grain yield is not limited.