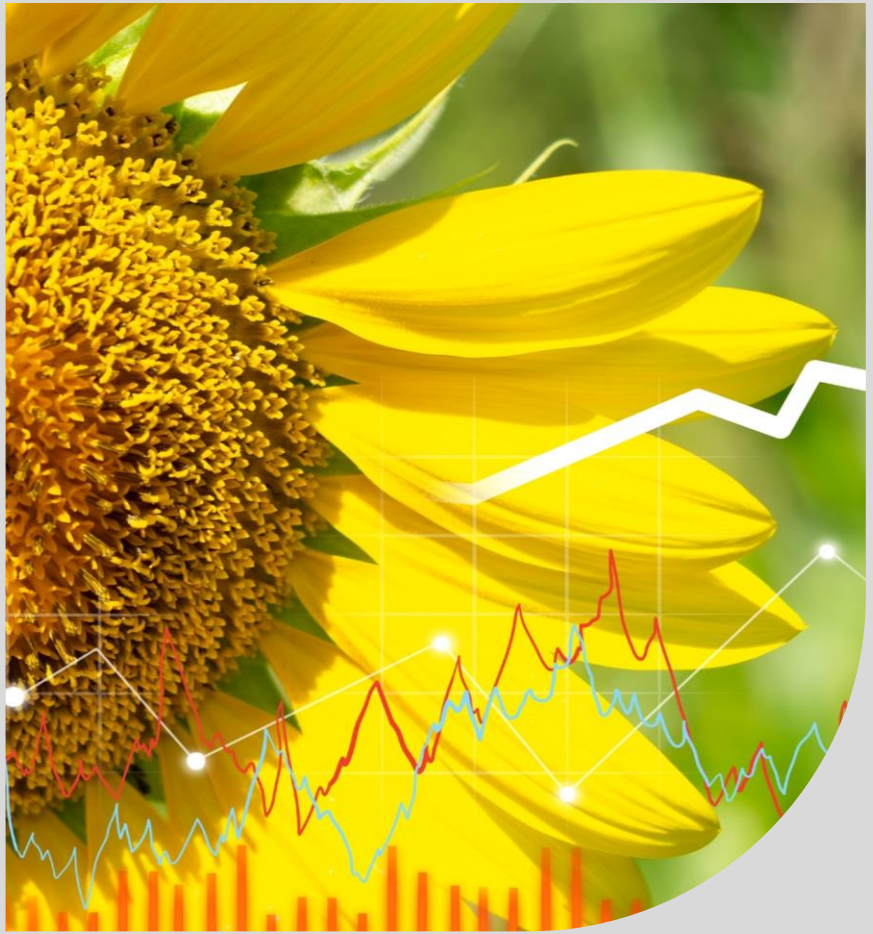
Spring Sunflower Boot Camp - Fertility

Production Practices – Sunflower Fertilization



Production Practices - Sunflower Fertilization Tools

- NDSU Sunflower Nitrogen Calculator –

North Dakota Sunflower Nitrogen Calculator Tool | NDSU Agriculture

Production Practices – Fertilizing Sunflower the basics

Soil testing is key-

- Because of sunflowers ability to root down as far as 6-7 feet, soil available N should be tested down to a minimum of 2 ft, if not further down
- Can also check soil available water
- % Organic Matter in Soil – higher OM expect more N mineralization from soil

- *Sunflowers respond the most to N and some to P and K*
- *Sunflowers can respond to S on lighter or sandier soils*
- *Other micronutrients haven't shown a yield response*
- *VH levels of Boron can cause toxicity*

Production Practices – Fertilizing Sunflower NITROGEN

- Recommendations are 5 lbs. available N per 100 lbs expected yield
  - 2500 lbs=125 lbs available N (applied+soil based)
- Both recommendations count all N in soil profile for a minimum of the first 2'; may want to include available N down to 3-4'

Production Practices – Fertilizing Sunflower NITROGEN

- Research shows having more than 225-250 lbs. available N can reduce yields
- Too much N does not add yield but adds to plant height and potential for disease and lodging in certain areas
- No more than 10 lbs N by the seed

Production Practices – Fertilizing Sunflower PHOSPHORUS

- Sunflowers do respond to P in L or VL testing soils
- *Recommend 14-30 lbs applied P per acre for yield goals 1500-2000 lbs for soils testing below 10 ppm. *See sunflower production guide

Because Phosphorus is not delivered as a salt, it can be laid in furrow with the seed

Production Practices – Fertilizing Sunflower POTASSIUM

- Potassium (K)
  - Sunflowers do respond to K ; deficiencies are not common in the Northern Plains (lighter and sandier soils)
  - Best broadcast prior to planting or in 2”x2” furrow band but total lbs N+K needs to be under 10 lbs.

THANK YOU

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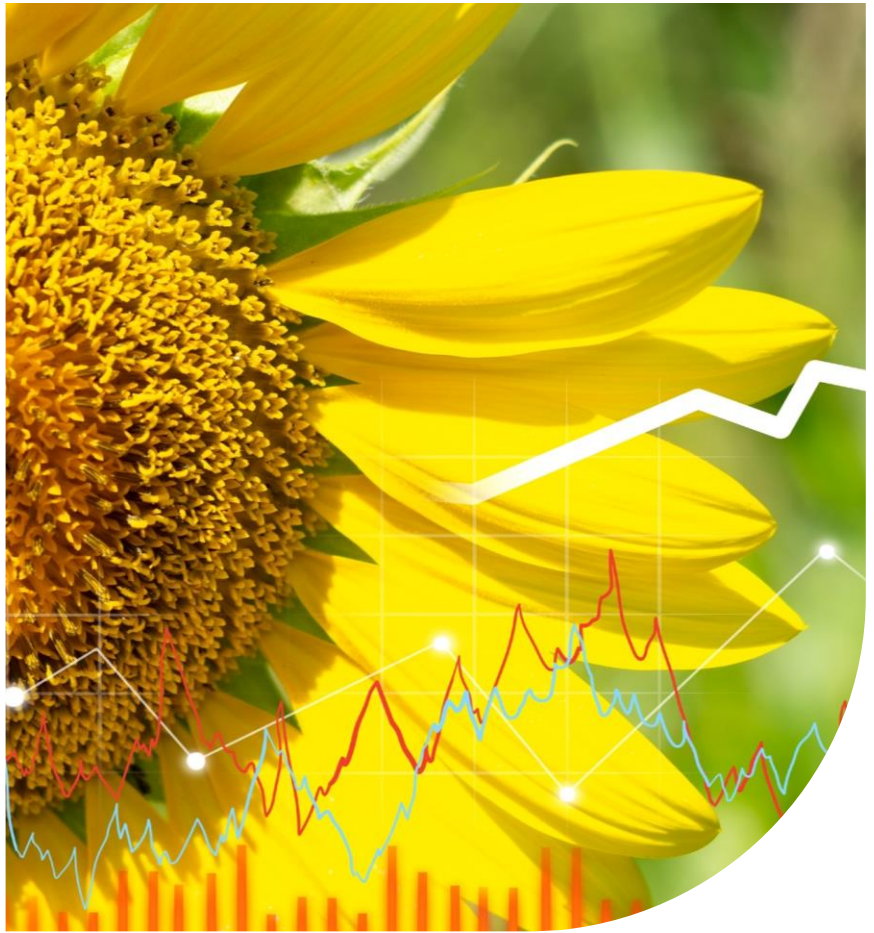

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