



Challenges and opportunities with Oat Production in Trøndelag

Norsk Landbruksrådgiving SA

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About Norsk Landbruksrådgiving SA / Norwegian Agricultural Advisory Service

- NLR is a nationwide cooperative
- Owned and governed by the members
- 24,000 members
- 370 employees.
- 100 offices
- 6 regional departments: North, Central, West, South, Eastern Norway, Inland
- Link between research and agriculture
- Almost 700 field trials are carried out annually with the members



Photo: Truls Olve T. Hansen

Challenges

Challenges - Myths

- Trust and perception: Old myths and moose damage hinder expansion.
- More wheat so more area for the moose
- Need for collective start in new areas to reduce mouse pressure per farmer.
- Stable yields and good varieties exist, but skepticism remains.
- Industry role - Not all mills take oats in Trøndelag
- Diseases and weeds: Fusarium and wild oat issues.
- Some farmers avoid oats due to wild oat control restrictions.



Photo: Karstein Brøndbo

Challenges - Price

- Economic risk: Price often does not justify risk.
- Target price lower for oats than barley
- High yielding barley varieties
- Porridge is for kids and the toothless"
- Easy to have one variety
 - Lack of knowledge
 - Different spraying regime
 - Need to change settings on seeder and combine
 - Drying and storage

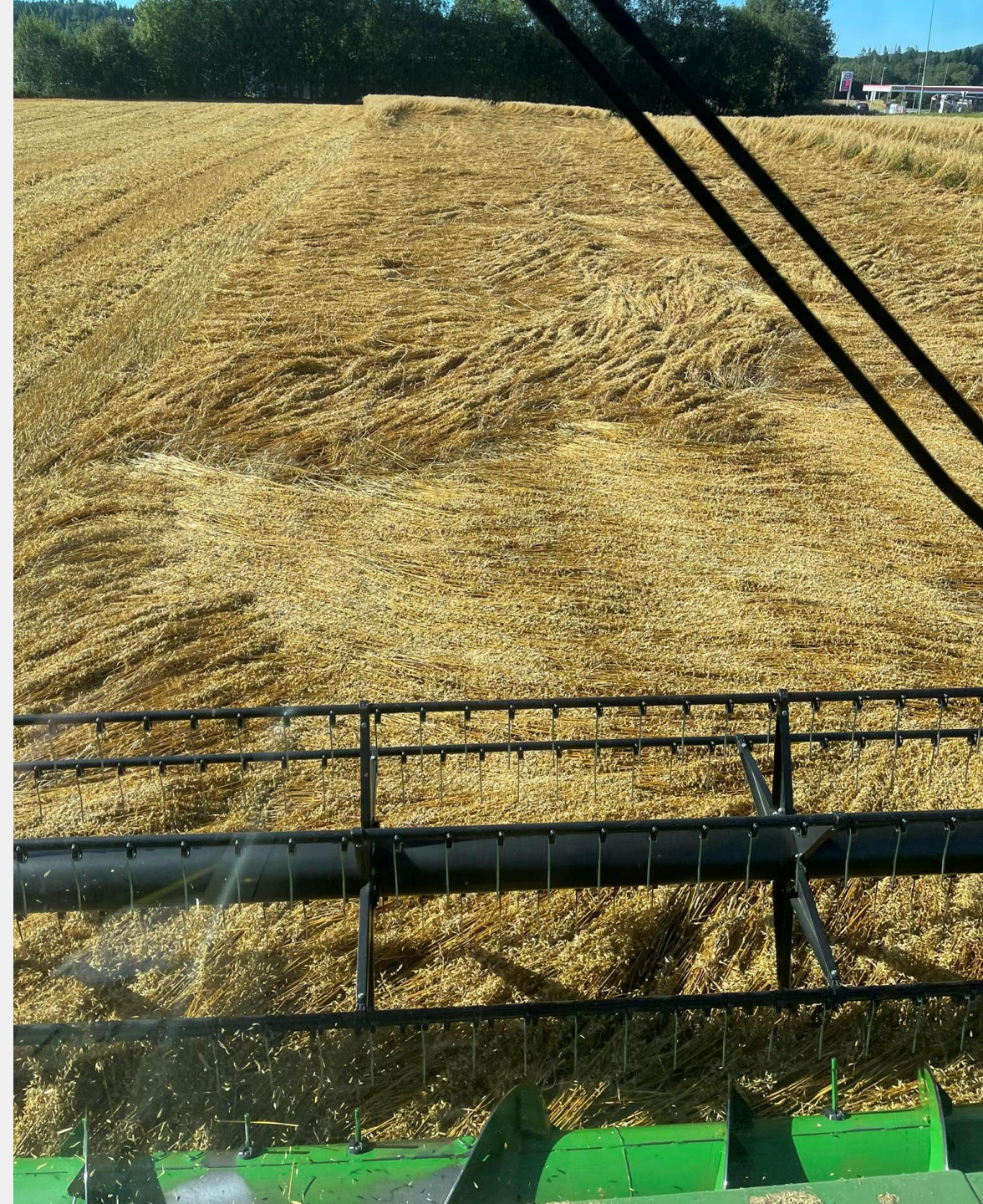
Crop	Target Price (nok/kg)
Milling Wheat	5,37
Milling Rye	4,22
Barley	4,08
Oats	4,04



Photo: Kristin Bergo

Challenges - Climate

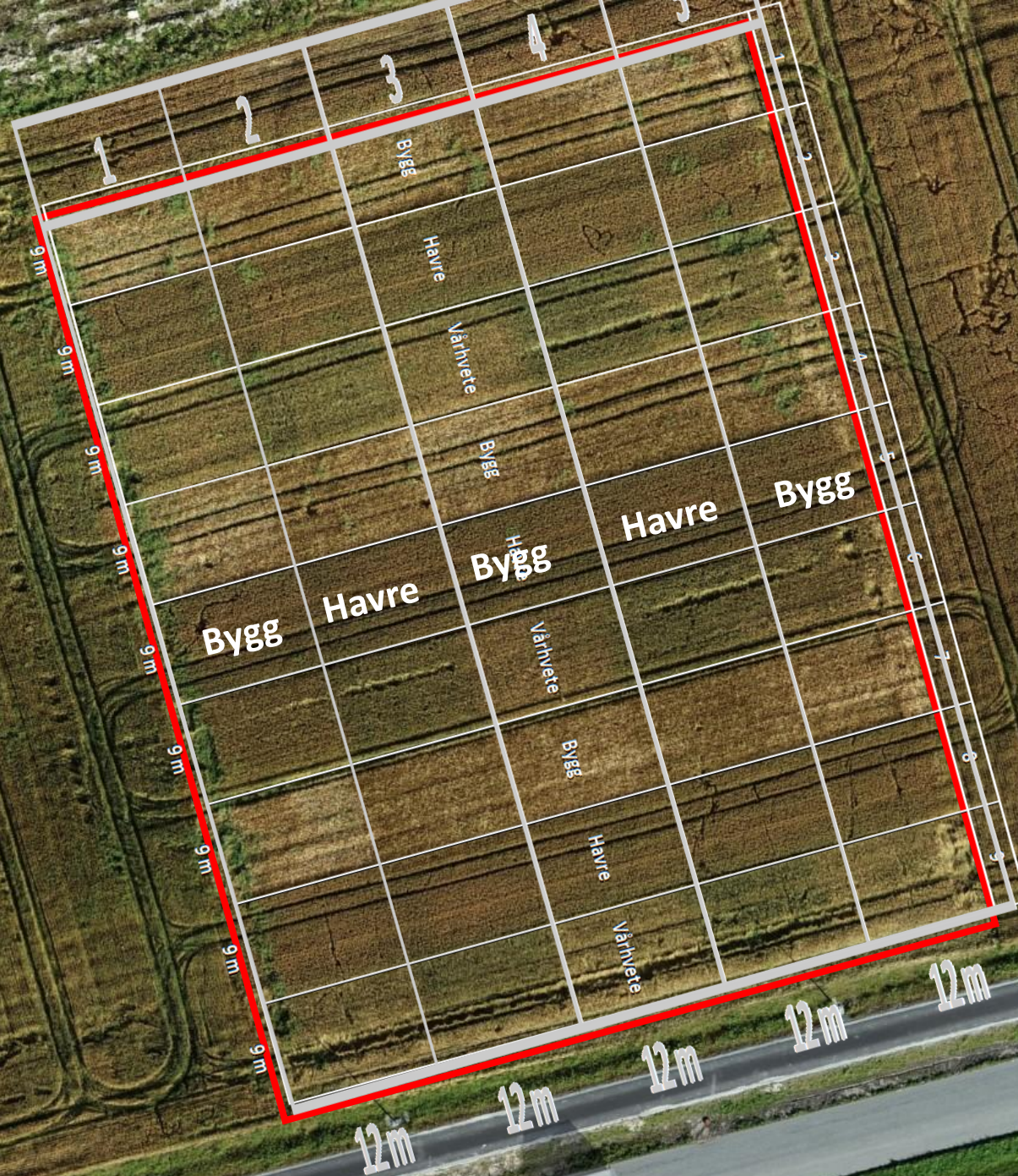
- Climate risk - Wet autums
- Late harvest increases risk harvest problems
- Manure and oats can give lodging
- Advantages: Cool, moist climate suits oats better than wheat.
- Challenges: Short growing season, risk of poor ripening.
- Weather damage during harvest can reduce quality and cause mycotoxins.
- "Had oats in 1979 and will never have it again"



Opportunities

2022

Photo: Biodrone / NLR



2023

Photo: Biodrone / NLR

Såretning

Høsteretning



2022



Photo: Jon Olav Forbord

Opportunities - Agronomy

- Agronomy: Robust crop, moderate input needs, reduces disease pressure.
- Yield potential -
- Many new and good oat varieties for Trøndelag
- Reduced tillage projects show promising results for oats.
- Oats improve crop rotation and risk distribution compared to barley.
- Intensive advisory programs needed in target areas.

Grain yield per hectare (kg) Trøndelag							
Year	2018	2019	2020	2021	2022	2023	Average
Spring / Winter Wheat	3070	4560	3640	3810	4400	4760	4040
Barley	1650	4300	3330	3940	3440	3780	3410
Oats	3660	4020	3100	3400	3440	3710	3560
Rye and Triticale	3040	3270	6070	2310	1260	590	2760



Photo: NLR

Opportunities - food

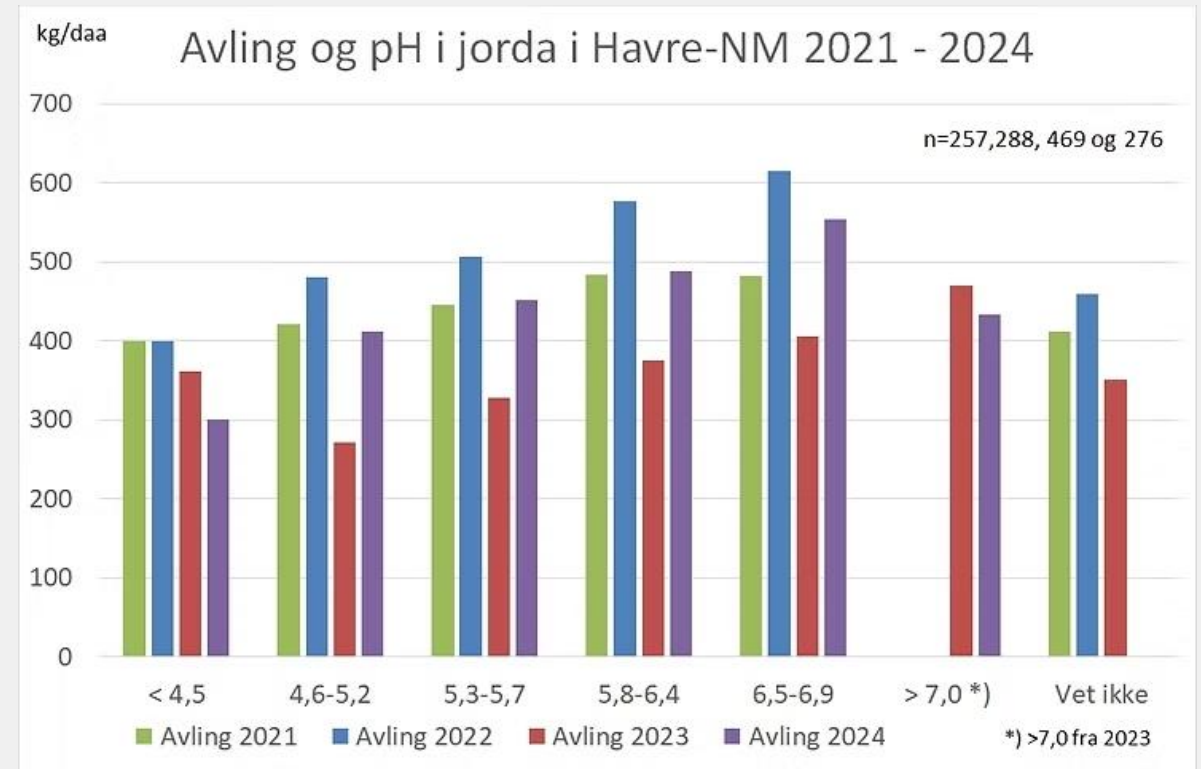
- Increase demand through innovative products (e.g., modern breakfast cereals, roasted oats).
- Health benefits promotion to boost consumption.
- Market: Growing demand for organic and gluten-free oats.
- Premium price for food-grade oats.
- "Kill me, my lord king, but not with porridge!"
- [*Tåtten om Snegle-Halle, oversatt av Birgit Nyborg*](#) (National and University Library of Iceland)
- Livestock is the main consumer of grain produced in Trøndelag



Photo: Åsmund Langeland

Opportunities - Lack of knowlegde

- Choose early, strong-straw varieties (Ridabu, Ringsaker, Vinger).
- Maintain pH ≥ 6.0 and ensure good drainage.
- Split nitrogen application
- Practice crop rotation to reduce disease and mycotoxins.
- Fusarium in oats in some years
- Many new good oat varieties for Trøndelag
- We have methods to spray on wild oats in other variety



Conclusion

- Oats have significant potential in Trøndelag with proper agronomy.
- Growing market for food-grade oats offers economic opportunities.
- Limitations include weather risks, soil structure, and disease pressure.
- Grain variety that is robust
- Strategic efforts and advisory support can overcome barriers.



Photo: Åsmund Langeland



Climate and Soil Conditions

- Advantages: Cool, moist climate suits oats better than wheat.
- Oats tolerate lower pH (down to 6.0).
- Challenges: Short growing season, risk of poor ripening.
- Weather damage during harvest can reduce quality and cause mycotoxins.
- Soil types: Silty and clay soils require good drainage.

- Skillet mellom konvensjonelt og økologisk dyrking er mest tydelige når det gjelder avling, med 418 mot 393 kg/daa i hele perioden. I 2024 var forskjellen 494 mot 320, men mindre signifikant. [Beregninger av dekningsbidrag i 2022](#) viste at de økologiske havredyrkerne gjorde det bedre økonomisk, så her må også innsparte kostnader og økte priser og tilskudd telle med i vurderingene.
- **Delt gjødsling** målt i forhold til en enkel vårgjødsling har gitt 525 mot 377 kg/daa i hele perioden. I 2024 var forskjellene litt mindre med 522 mot 453.
- **Stråforkorting** henger signifikant bedre sammen med bedre avling enn ubehandlet

