

Barley Seeding Rates Protocol

Objective

Optimizing seeding rates based on target plant density to balance seed costs, yield, crop competitiveness and stand management

Rationale

The recommended seeding rate for malt barley is 300 live seeds/m², which corresponds to 20-22 plants/ft². Researchers found that 300 live seeds/m² optimized agronomics including yield and lodging, as well as malt characteristics including protein and plump kernels. Applying these small-plot results at field scale allows producers to fine-tune based on seeding equipment, soil zone and management practices.

Treatments and Methodology

The treatments were replicated four times and applied in randomized strips. All plots were managed the same agronomically (apart from seeding rates) including seeding date, variety, seeding depth, seed treatment, and pesticide application.

Actual seeding rates for each treatment varied depending on the producers needs and current rates.

On request, an additional treatment of a variable seeding rate with adjustments for landscape position (knoll, mid-slope, and depression), was applied.

Yield was determined for each plot separately by weighing with a weigh wagon or grain cart with scale. Grain samples were collected from each plot separately for post-harvest quality analysis consistent with malting barley quality analyses.

Treatment 1:

Target 250 seeds/m² – Reduced rate

Treatment 2:

Target 300 seeds/m² – Standard rate

Treatment 3:

Target 350 seeds/m² – High rate

Rep	Treatment
Rep 1	Treatment 2
	Treatment 1
	Treatment 3
Rep 2	Treatment 1
	Treatment 3
	Treatment 2
Rep 3	Treatment 3
	Treatment 2
	Treatment 1
Rep 4	Treatment 2
	Treatment 3
	Treatment 1

Data collected

- Soil and seed testing data
- Crop stand density
- Height
- Lodging
- Maturity
- Yield
- Grain quality

