the BarleyBin Field Lab

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Barley Seeding Rates

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/m^2, which corresponds to 20-22 plants/ft^2. Researchers found that 300 live seeds/m^2 optimized agronomics including yield and lodging, as well as malt characteristics including protein and plump kernels.

Field Layout and Selection: Field selection and layout should be to minimize extraneous sources of variability, such as old farmyards and shelterbelts. Discuss options with your agronomist for the optimal location and layout.

Treatments: Field scale research, like small plot research, should include both replication and randomization. But, unlike small plot research, only 2-3 treatments should be included in the experiment.

Replication ensures that the treatment differences observed are real differences due to the treatments and not other factors. Randomization ensures that results are not biased by known or unknown factors.

Example: For each treatment, seeding rate is adjusted to account for seed weight (TKW) and germination, as well as expected mortality. Record all data and estimates.

Treatment 1: Target22 plants/ft^2
Treatment 2: Target 30 plants/ft^2
Treatment 3: Current seeding rate (make sure to calibrate and record the rate)

Replication 1	Treatment 1
	Treatment 2
	Treatment 3
Replication 2	Treatment 3
	Treatment 1
	Treatment 2
Replication 3	Treatment 2
	Treatment 3
	Treatment 1
Replication 4	Treatment 3
	Treatment 2
	Treatment 1

Additional Notes:

1. The same seeding depth and drill must be used for all treatments.
2. All treatments must receive the same fertilizer, seed treatments, herbicide, fungicide and be the same variety, as well as any other management that may be applied.