

Cleanliness and hygiene

Wash all sampling equipment prior to starting sampling and between lots using water, detergent and a brush. Dry equipment or allow it to dry before use.

Equipment

The single chamber sampler (or “deep bin probe” or “Neate sampler”) collects one primary sample at a time. Screw-on extensions can be used if the depth of grain in the bulk is greater than the length of the sampler.

The multi-chamber sampler usually has three or more chambers; all seed collected in this one sampling action equals one primary sample. It can be used to sample grain up to two metres deep and is suitable for most trailers. A piece of plastic guttering is useful for collecting samples from this type of sampler.

If you do not have access to appropriate equipment, have your grain sampled by a trained agronomist.

Germination testing

Low germination, due to disease, sprouting, drying, mechanical or chemical damage, is a major cause of poor quality in UK seed. Where time is limited, the tetrazolium (TZ) test is recommended. However, this does not detect chemical damage and could over-estimate germination if pre-harvest glyphosate is used.

Seed health testing

- Never sow untreated seed without testing for seed-borne diseases, particularly loose smut, leaf stripe and net blotch (where not previously present).
- Test for ergot, covered smut and *Fusarium graminearum* if a problem is suspected.

Regulatory standards and advisory thresholds

Disease	Method	Duration	Results given as	Regulatory S standard A dvisory threshold
Loose smut <i>Ustilago nuda</i> f. sp. <i>hordei</i>	Embryo extraction	48 hours	% infection in 1000 embryos (advisory) or 2000 embryos (certification)	Maximum infection: A S 0.5% – minimum standard S 0.2% – HVS
Leaf stripe <i>Pyrenophora graminea</i>	Agar plate Molecular	7–10 days 48 hours	% infection Presence/Absence	A Treat if over 2% A Treat if present
Net blotch <i>Pyrenophora teres</i> f. sp. <i>teres</i>	Agar plate Molecular	7–10 days 48 hours	% infection % infection	A Treat if over 15%
Ergot <i>Claviceps purpurea</i>	Visual 500g or 1000g search	24 hours	Number of pieces in 500g or 1000g	Maximum pieces: A S 3 pieces/500g – minimum standard S 1 piece/1000g – HVS
Covered smut <i>Ustilago hordei</i>	Wash	24 hours	Spores/seed	A Treat if present
Seedling blights <i>Microdochium nivale</i> <i>Fusarium graminearum</i> <i>Cochliobolus sativus</i>	Agar plate Agar plate Agar plate	7–10 days 7–10 days 7–10 days	% infection % infection % infection	A Treat if over 30% A Treat if over 10% A Treat if over 30%