

HARVESTING WINTER CEREAL GRAINS FOR SPRING SILAGE

Using small grains in spring is a common practice for many livestock producers. Winter cereal grains are used as a cover crop and increasingly being used as a spring forage source which requires additional management considerations. Producers can receive not only the forage benefit from winter grains, but also the role these cover crops have in protecting the soil and guarding against yield-robbing outcomes thrown our way by Mother Nature.

Below are reminders when using winter cereal grains as a silage source, which is an excellent way to make these “dual-purpose” crops provide a positive return in the first year of practice, if implemented correctly.

- 1. The best compromise between yield and quality occurs when grains are harvested in the early-dough stage, however it’s essential to match livestock to quality goals and expectations.** Livestock and lactating dairy require high-quality forage to gain weight and/or produce milk. Conversely, dry cows can handle somewhat lower standards. Harvesting small grains in the boot-early heading stage typically yields better quality (10-12% crude protein), while delaying harvest until dough stage will be suitable for dry cows (6-8% crude protein).
- 2. Harvesting later gives extra tonnage, without a huge deduct in protein levels.** In fact, allowing many small grains to mature to late dough (such as wheat and barley) often increases the total digestible energy AND crude protein. This is due to the volume of dry matter produced during this period superseding the small decrease in crude protein from the later cutting.
- 3. Shoot for 60-65% moisture** (or approximately 35% DM). Optimum fermentation takes place when silage moisture is somewhere between 55 and 70%. When forage is dry, it won’t pack very well (and higher moisture forages like alfalfa will need to be added). Forage that is too wet may cause unnecessary seepage, which decreases palatability.
- 4. BE READY.** Cereal grains progress from boot through dough stage extremely quickly. Depending on species, optimum harvest windows may be very short- barley for example is just 3-5 days. More generally, the boot, milk and dough stages across most small grain species lasts approximately 7-10 days. Barley is usually the first grain to mature, followed by wheat, triticale, rye (in that order), and oats lags behind all others by 1-2 weeks. Growers with larger acres should plan accordingly.
- 5. If legumes are included in the stand, evaluate proper harvest timing based on the maturity of the cereal crop, not the legume.** The addition of legumes can have positive impacts on quality assuming the right legume



- was selected and proper seeding rates were followed. If legumes make up more than half the final stand, it may be necessary to wilt the crop first due to the excessive moisture present. Wilting should also be planned if silage is cut prior to boot stage. Successfully wilting cereal grains can be a challenge, and better wilting is achieved when windrows are wide and tedders are used to spread out the crop directly after the stand is mowed.
- 6. Avoid turning small grains that have “headed out” into hay.** The rough awns of many small grain seeds can aggravate livestock’s eyes and mouths. When heads appear, it’s best to turn these stands into silage.
 - 7. Cereal grains have hollow stems and require a finer chop, along with adequate packing of the silo or storage structure.** As with any silage, plan on filling the silo as quickly as possible and/or seal the storage surface with sheeting.

Other factors can ultimately guide decision making on when to cut small grains, including weather, machinery availability, crop rotation and more.

HAVE A PLAN - PREPARE FOR CURVEBALLS IF THEY OCCUR! For more details on harvesting small grains for forage, please see our current website resources section for forage guides.