GUEST COLUMN

No Horsing Around!
Foxtails Don't Belong in Pastures or Hay

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Foxtail grass weeds (*Setaria sps.*) are highly problematic in horse hay and highly undesirable in horse pastures. Foxtail grass weeds do not contain toxic substances affecting horses after ingestion, but the physical structures can cause physical harm (Figure 1). Awns on the seeds and barbs found on the seed head and stems can cause physical trauma to the mouth leading to mouth blisters and irritation of the gastrointestinal tract. If horses are exposed to foxtail during feeding for extended periods of time, mouth blisters will advance to mouth ulcers, leading to limited feeding, lethargic behavior, and weight loss (Figure 2).

There are multiple foxtail weed species, but giant, yellow, green, and bristly are all common species that can be problematic in hay and pasture settings. All are annual weeds, meaning they emerge in the spring (usually late spring to early summer) and set seed later in the same growing season. Foxtails have fibrous root systems and form a distinctive "fuzzy-looking" seed head. They tend to have an "upright" growth pattern for their leaves, but to identify them early in the season, look closely at the ligule (membrane between leaf sheath and stem) and look for a fringe of hairs. There are more specific characteristics that separate foxtail species from one another, but the ligule with a fringe of hairs most uniquely separates foxtails from other grasses (ipm.missouri.edu/ipcm/2014/5/Weed-of-the-Month-The-Foxtails/). Desirable forage grass species in pastures and forage hay stands are perennial, so as alfalfa dies out over time, or if pastures are overgrazed, foxtails get established in bare areas of fields. Once they produce seeds, they increase in density. The problem compounds as their competitive nature increases when left uncontrolled.

In pastures, timely mowing can help prevent seed production – but mowing can also have challenges. There can be high variation in plant maturities requiring multiple mowing timings to prevent seed production. Highly variable plant heights at the time of seed production can also prevent mowing low enough in all areas of pastures to prevent seed production.

Unfortunately, there are no options to control foxtails with postemergence herbicides without also killing desirable forage grasses in pastures or mixed-stand hay fields. Foxtails can be controlled with a preventative residual herbicide, such as Prowl® H2O herbicide, if applied prior to foxtail emergence. Prowl H2O herbicide prevents foxtail weeds from getting started and ultimately going to seed, while allowing maximum growth of desirable forage species.

Figure 1. Foxtail seed head (A), awns connected to the seed (B), close-up magnification of barbs on awns (C), and direction of barb orientation in which barbs allow awns to stick (D) or slip (E).

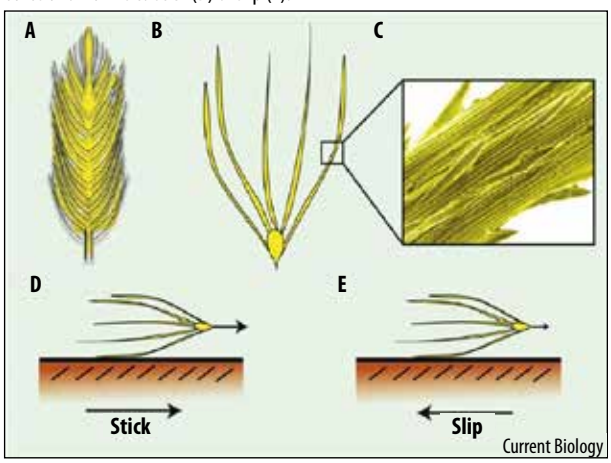
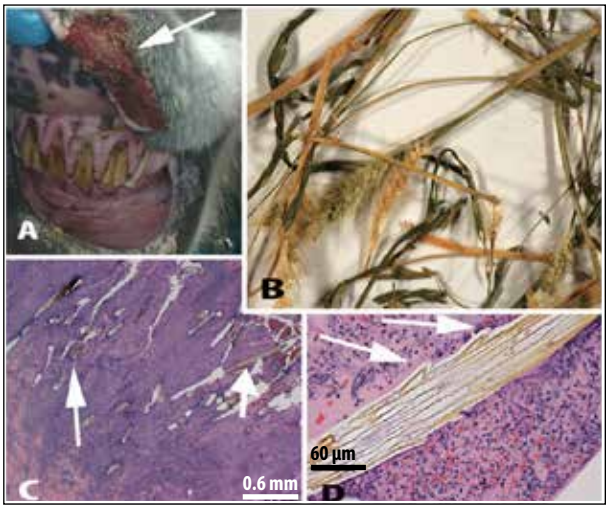


Figure 2. Lesion on upper lip (A - arrow). Appearance of foxtail seed heads in mixed alfalfa-grass hay (B*). Low-power H&E of biopsy, showing large number of awns in inflamed lesion (C - arrows). Close-up of an awn, showing sharp barbs (D - arrows).



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Apply Prowl H2O herbicide at 1-4 qts/ac during early green-up in pastures until early May, depending on geography, and apply in alfalfa prior to 6" regrowth in mixed-forage stands. Prowl H2O herbicide does not control emerged weeds, so no additional adjuvants are needed. In pastures, there is no pre-harvest or grazing restriction following application. In alfalfa stands, there is a 14-day pre-harvest interval that should not be a problem when applied prior to 6" regrowth. In pure forage grass pastures, add Sharpen® herbicide at 1-2 fluid oz/ac for postemergence and residual control of annual broadleaves. Sharpen herbicide also does not have a pre-harvest or grazing restriction following application, but a methylated seed oil (MSO) should be added at 1% volume per volume for postemergence broadleaf activity. Prowl H2O herbicide can also be applied as impregnated on dry fertilizer, which is a common application method for lawns and turfgrass to prevent annual grass weeds like foxtail and crabgrass species. The most important thing to remember when managing pastures and mixed-stand hay crops is that they are perennial crops, and, in most cases, an ounce of prevention is worth a pound of cure. But in the case of foxtail weeds growing in a stand of perennial forage grass, there is no cure, making the ounce of prevention priceless.

For more information, contact a local BASF retailer or representative.