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EVALUATING FORAGE OPTIONS IN DRY CONDITIONS

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Hay is in short supply in areas that were hit with drought last growing season, and many of those same areas are short on soil moisture going into the planting season. Hay stocks have tightened up to the point where most geographies in the U.S. are experiencing some level of increased hay and forage prices, often with longer hauls when purchasing hay. The situation is forcing farmers in affected areas to evaluate all their options for forage production.

If you're coming into spring with less than enough forage to make it all the way to corn silage harvest, you may have already planted a spring small grain forage crop to tide over your on-farm forage supply through late summer. Harvest timing to achieve the balance of forage quality versus yield depends on your overall ration-balancing needs, including the animal production you expect from the group of animals you'll be feeding. For dry-cow and late-lactation groups, this could mean harvest at soft dough stage for increased dry matter yield. For high-production groups already receiving a lot of grain in the ration, it probably means boot stage harvest for better fiber digestibility and milk production.

Are you on the fence about whether soil is too dry to seed alfalfa? Planting into dry soil conditions can be successful only if there is enough surface moisture to get seed germinated and seedlings started, *and* enough soil moisture to sustain growth for at least six weeks until taproot establishment. If both topsoil and subsoil are dry, it's better to wait for sufficient rain and soil moisture even if it means delaying new seedings into late summer.

Consider sorghum-sudangrass or forage sorghum as a more drought-tolerant option than corn or spring small grains, especially if you have to wait for rain to pump up your soil moisture. Sorghum species are more drought-tolerant than most other forage options and can be planted well into June with less negative yield impact than corn for silage. Furthermore, the sorghum species can take better advantage of heat above 86°F than corn, and this is a dry-matter production advantage over corn during the heat of summer.

Male-sterile BMR forage sorghum is an attractive alternative to corn silage, especially in drier soil conditions or with delayed planting. The male-sterile characteristic leads to high sugar accumulation approaching 18-20% of dry matter after heading and the cessation of vegetative growth, while the BMR trait increases fiber digestibility.

Evaluate existing stands of alfalfa for productivity potential. Older stands should still have at least 4-5 plants per square foot, but the best stand evaluation technique is to count stems per square foot, since each alfalfa plant can send up several shoots from the crown area following winter dormancy and after each cutting. Fifty-five stems per square foot has been shown to be adequate for high yields.

Even though fertilizer prices have risen, so have hay prices. Older stands of alfalfa that are still productive may have pulled down your soil fertility levels if your fertilizer applications haven't kept up with crop nutrient removal for the past few years. Given current hay prices, now is a good time to soil test and make sure your soil fertility levels are adequate for productive alfalfa growth and yields, especially in older stands that are still thick enough to provide a good yield response if fertilizer is applied.

Consider top-dressing alfalfa after first cutting to maintain yield levels, especially with potassium if soil test potassium is low. Sulfate forms of sulfur can be fairly rapidly available too, if needed. Alfalfa requires about 6 pounds of sulfur per ton of dry hay production, and high-yielding fields will likely need some supplemental sulfur. Top-dressing phosphorus can boost yields as well when soil levels are low but tend towards slower uptake and utilization.

When small grain harvest is finished, evaluate soil moisture for the possibility of establishing new alfalfa stands. Get a jump on next year's forage needs by planting alfalfa in mid-late summer. A new stand that is fully established going into winter can provide maximum or near maximum yields beginning with the first cutting the following spring. Alfalfa can be planted any time there is sufficient soil moisture for seedling emergence and early establishment. Weeds are often less problematic with late summer establishment. Make sure there is adequate moisture at seeding depth. It's critical to get good seed-to-soil contact for good germination.

Here are a few useful references:

Increase alfalfa hay yields by addressing sulfur deficiency - MSU Extension
Alfalfa Stand Assessment (psu.edu)
Virtual Forage Conference - Male Sterile: Sorghum & Sorghum-Sudan, A Major Forage Quality Advance - YouTube
Establishing Alfalfa During Late Summer (wisc.edu)
Harvesting drought-stressed small grains as forage (umn.edu)