The 2018 extended drought in Southwest Missouri has left pastures and hayfields with few forages left at the end of summer. Livestock producers are scrambling to offset the cost of high priced hay by insuring that forages are growing for fall and winter grazing. Under normal circumstances, the cost of feeding a cow per day during the winter months using hay is 2-3 times more than if the same cow was dependent on fall and winter pasture. Considering the cost of hay today, it may be more like 4-6 times the cost, giving even more credence to the necessity of efficient fall grazing practices. Below are options that producers could consider, dependent on the conditions of the field:

- **Stockpile Your Better Tall Fescue and Bermudagrass Fields**
  - This is our cheapest and easiest option for fall and winter grazing. **It's estimated that 80-90% of livestock producers should primarily focus on this option if fescue stands are strong.**
  - It is easy to look at a droughty fescue field and think there is no hope for regrowth. We know from past droughts, that there is lots of hope for fescue to return in the fall. First, make sure there is some green in the base of the crown. **If the plants are still alive and there is a 75% stand of fescue left, the best approach will be to stockpile it.**
  - Fescue quality surpasses most hay sources. ADF can run 30-33 vs in the mid-40s for hay.
  - Endophyte can still be a problem for fall and winter fescue grazing and heavy doses of nitrogen can make it worse. Keep an eye on cattle condition this fall.
  - For stockpile allocated fields, after clipping or grazing down, apply 40-60 lbs N per acre in mid to late-August and close gates. Allow grass to grow in its prime time of growth…September, October and November, then begin grazing.
  - If using urea with Agrotain, a rain needs to occur within 14 days to incorporate it and minimize volitization. Ammonium nitrate will be stable and wait for a rain.
  - **Rotational grazing will nearly double utilization.** Strip grazing or multiple paddocks work exceptionally well for rationing out stockpiled fescue.
  - An early ice storm or foot traffic on these fields could deteriorate them prematurely.
  - If you have bermudagrass fields, don’t forget that you can also stockpile them using nitrogen and closing gates. Just remember to graze them first after frost before any fescue is grazed.

- **Pastures with Poor Stands of Fescue or with No Fall Growth Potential May be Planted with Winter Annuals**
  - Planting winter annuals into a strong fescue stand is counter-productive and may not be cost-effective.
  - August is the month to evaluate stands of fescue. Many fields are full of grassy and broadleaf weeds like foxtail, purpletop, broomsedge and ragweed. If there is little tall fescue left, a plan should be developed for either providing temporary forage or a long-term plan for reestablishment.
  - Fields of corn silage stubble, bermudagrass, crabgrass and possibly Caucasian bluestem are prime candidates for winter annuals. Later in September would be best for planting into summer forage fields.
  - Winter annual forage options for fall and winter grazing include:
    - Cereal Rye – Quick establishment and will grow later into the winter than most other cereals; Excellent fall tonnage and quality; Good regrowth potential after grazing; Heads out early in the spring and quality is compromised; Needs tight grazing in the spring to keep vegetative.
- **Triticale** – Genetic cross between cereal rye and wheat; A good compromise between rye and wheat regarding tonnage, quality and a balance between fall and spring grazing; Does not regrow after a grazing as well as rye.

- **Wheat** – Little fall growth so will provide the most forage in the spring; Higher quality forage compared to rye and triticale. Good option for early spring hay or haylage; Slower regrowth following grazing.

- **Oats** – Quickest out of the ground; Fall growth only, then may die out in winter; Usually good tonnage produced; Poor tolerance to overgrazing; Slower regrowth than other cereals. Oats can also be planted in the late winter/early spring for quick spring forage; Oat stands are sometimes more challenging when no-tilled. They do best with some limited tillage.

- **Barley** – Excellent quality forage; Considered to be one of the better fall planted annual forages regarding early growth, quality and tonnage prior to winter; Seed availability is more challenging; Winterhardiness can be an issue.

- **Brassicas – Turnips, Kale, Radishes** – Turnips may provide some of the best tonnage of these options with up to 3 tons of forage Oct-Dec. 1 and are inexpensive to plant; It cannot be expected to provide feed beyond Jan. 1 most years; Quick establishment but little regrowth potential; Bloat, sulfur and nitrate toxicity and milk flavoring is a possibility; Do not feed alone – either mix with a cereal grain or annual ryegrass, or feed hay with it; Plant in late August and apply 60 lb N at planting where there is little competition; Once established can compete heavily against good fescue stands; With rotational grazing, you can get at least two topgrowth harvests off of turnips plus a harvest of the bulb itself; Heavy grazing can lead to erosion issues on hillsides; Can also be planted in the spring.

- Cereal grain establishment and maintenance: Plant typically in early September. 40-60 lb/a N at establishment or after emergence with additional 40-50 lbs in the spring as needed. Don’t graze lower than 3”. Graze rye heavily in the spring to maintain vegetative growth.

- Annual ryegrass has a very different growth habit than cereal rye; It will grow in the fall but may not produce as much fall growth; Heavier growth in the spring and will last into May, then reseed itself; May complement these stands with annual crabgrass in the summer.

### Seeding Rates (lbs PLS/Ac)

<table>
<thead>
<tr>
<th>Forage</th>
<th>Seeding Rates (lbs PLS/Ac)</th>
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<tbody>
<tr>
<td></td>
<td>Solid Stand Rates – No-till Drilled</td>
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<tr>
<td>Cereal Rye or Wheat</td>
<td>100-130</td>
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<tr>
<td>Triticale</td>
<td>75-100</td>
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<tr>
<td>Oats</td>
<td>64-80</td>
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<tr>
<td>Turnips</td>
<td>2-4</td>
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<tr>
<td>Fescue / Orchardgrass</td>
<td>15-18</td>
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<tr>
<td>Annual Ryegrass</td>
<td>25</td>
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- Complete Renovation of Worn-Out Fields – Should Winter Annuals Be Involved?
  - Some fields may be due for complete renovation. Think of the long-term goals and plan for success. Trying to doublecrop new stands of permanent pasture with winter annuals for fall forage may not be a good plan for two reasons: 1. Competition from the winter annual is fierce leading to mediocre stands next spring; 2. Fall grazing can damage the new permanent stand.
  - Fields that will be killed to renovate using winter annuals would be prime candidates to establish warm season grasses next spring (big bluestem, Caucasian bluestem, bermudagrass, etc.), or novel endophyte fescue the following late summer/fall.

8/15/18