What Grass Species Is Right for Your Farm?

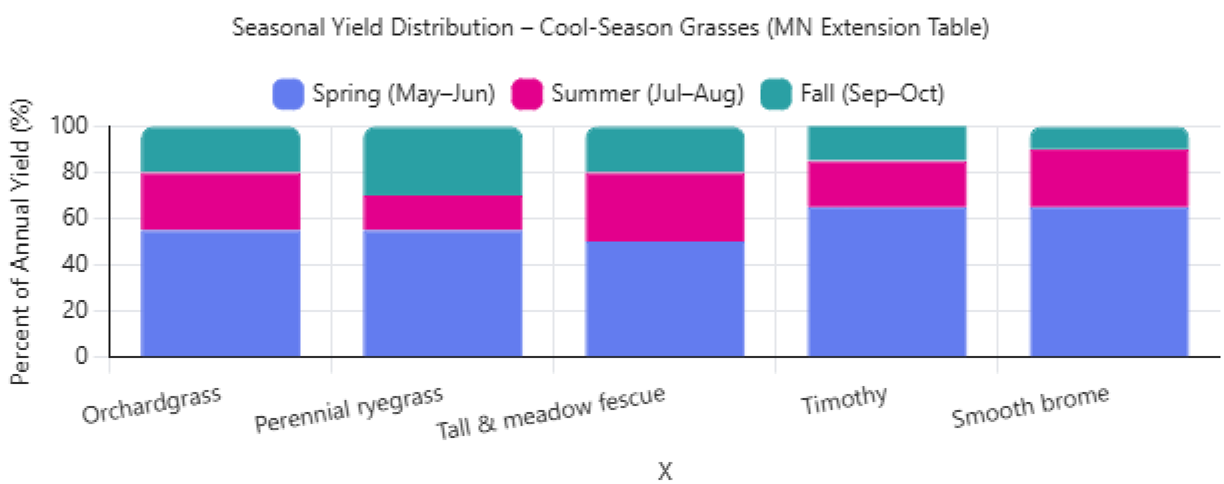
Choosing the right grass species is one of the most important management decisions for hay and pasture systems. Yield potential, seasonal growth pattern, forage quality, soil fit, and management style all matter—and no single grass is “best” for every farm.

Below is a comparison of **common cool-season grass species** using three key lenses:

1. **When the yield shows up**
2. **How much total forage is produced**
3. **Relative forage quality potential**

These comparisons can help match grass species to your **feeding needs, harvest timing, and acres.**

1. Seasonal Yield Distribution: When Do You Need the Feed?



Source: UMN Extension “Managing perennial cool-season forage grasses in Minnesota” (yield distribution table)

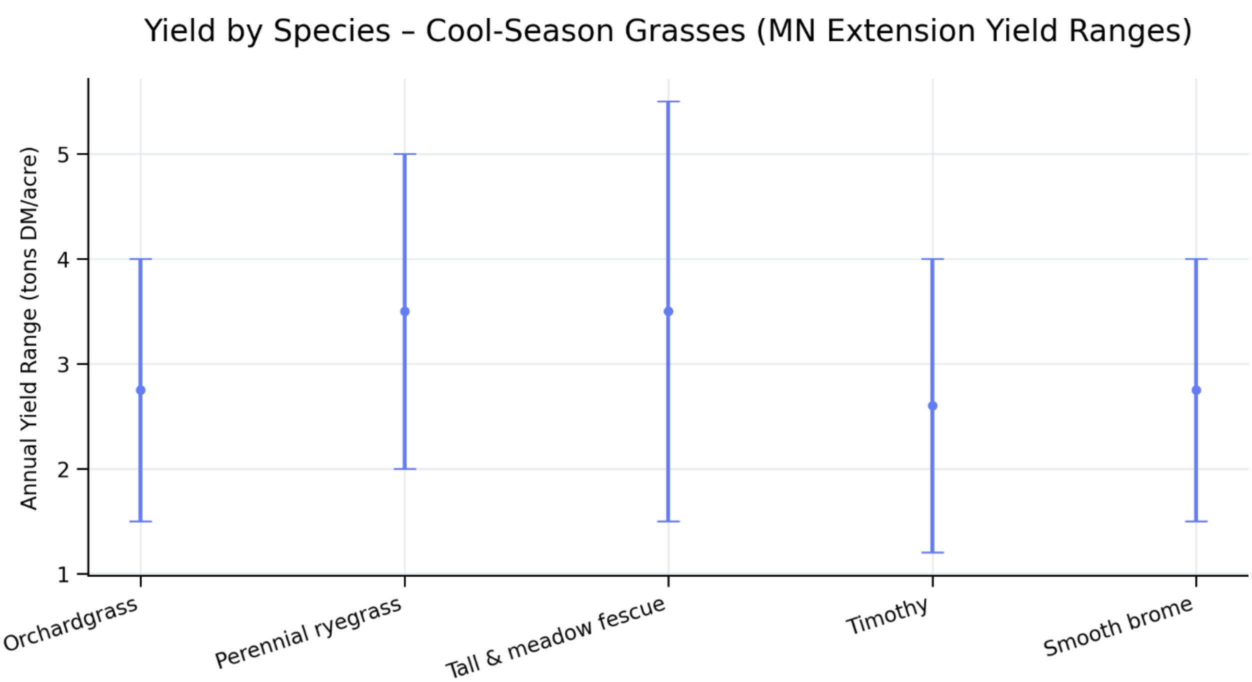
Cool-season grasses differ greatly in *when* they produce forage during the year. This matters if you:

- Need **early spring feed**
- Want **summer regrowth**
- Are targeting **stockpiled fall grazing**

What this shows

- **Timothy, Brome and Perennial Ryegrass** are heavily spring-biased, producing the majority of their yield early.
- **Orchardgrass, Tall Fescue, and Meadow Fescue** provide a more balanced distribution, with stronger summer and fall regrowth compared to timothy.
- Species with flatter distributions are often a better fit for:
  - Multiple cut systems
  - Grazing
  - Farms trying to reduce feed gaps after first cutting (reduce the summer slump)

2. Yield Range by Cool Season Grass Species: How Much Forage Is Produced?



Source: UMN Extension “Managing perennial cool-season forage grasses in Minnesota” (yield range table)

All cool-season grasses can be productive, but genetics and species growth habits matter.

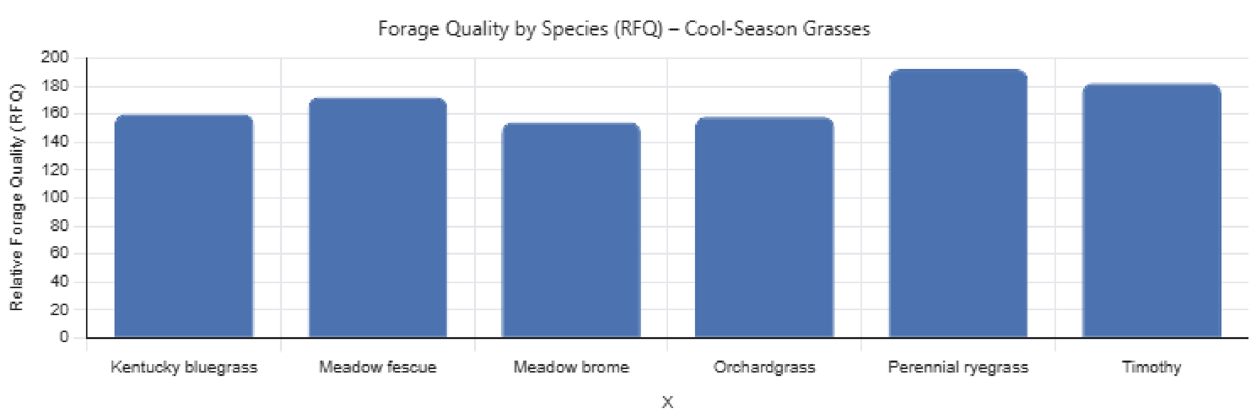
Take home message:

- **Tall Fescue** leads for total season yield under good management, particularly where moisture is adequate.
- **Meadow Fescue** and **Orchardgrass** offer strong yield with better quality flexibility than tall fescue.
- **Timothy** tends to be lower yielding overall, despite strong spring production.
- **Perennial Ryegrass** typically trades some yield potential for high feed quality.

Management matters

- Fertility, harvest timing, and cutting frequency will influence these rankings.
- Yield advantages matter most where:
    - Acres are limited
    - Stored forage is critical
    - Manure nutrients are available to support intensively managed grass

3. Forage Quality by Species: What Are You Feeding?



Note: Graph shows mean Relative Forage Quality (RFQ) by grass species based on University of Vermont Extension perennial grass variety trials, using laboratory-measured intake and digestibility parameters aggregated at the species

level. The values reflect harvest timing and management conditions of the trial year not the genetic potential of each species.

Source: RFQ values: University of Vermont Extension, *2023 Perennial Grass Variety Trials* (Table showing average RFQ by species).

Take home message:

- **Perennial Ryegrass** consistently ranks highest for digestibility and relative forage quality (RFQ).
- **Orchardgrass and Meadow Fescue** balance strong yield with good fiber digestibility when harvested on time.
- **Tall Fescue** tends to run lower in digestibility unless newer, soft-leaf or novel-endophyte types are used.
- **Timothy** can test very well at early harvest but quality drops rapidly if cutting is delayed.

Harvest timing is critical

- Grass quality changes fast—often faster than alfalfa.
- Wide harvest windows favor species known for better fiber digestibility retention.

Matching Grass Species to Your Farm – In conclusion:

Farm Priority	**Species That Fit Well**
Early spring forage	Timothy, Perennial Ryegrass, Brome
Season-long production	Orchardgrass, Meadow Fescue, Tall Fescue
High total tonnage	Tall Fescue (modern types)
High forage quality	Perennial Ryegrass, Meadow Fescue
Grazing & regrowth	Orchardgrass, Meadow Fescue