BEST MANAGEMENT PRACTICES FOR GROWING TALL FESCUE SEED

Tall Fescue (TF) seed production can be a very profitable crop to grow in Western Canada. As with all crops, management is critical to achieving high yields and quality. The following management practices are essential to have success with this crop.

Plan Ahead

1) Field Selection

- Choose a field that historically has a low incidence of perennial grass weeds (quackgrass, foxtail barley,etc) as well as wild oats & annual bluegrass.
- Avoid fields with residual herbicides that could impact establishment.
- TF performs best with ample moisture and can be used to manage excess moisture fields. TF also performs well under irrigation.
- TF can be produced under challenging soil conditions, including moderate levels of salinity, alkalinity and acidity; however, these conditions will impact crop productivity. Top yields are achieved when planted on highly productive soils.

2) Field Preparation

- Pre and post-harvest glyphosate in the year prior to planting TF are very helpful in reducing quackgrass and other perennial grasses.
- If conditions allow, apply glyphosate prior to seeding TF.
    - Tank mix options: Prepass XC, Express SG, or GoldWing

Establishment

1) Companion Crop

- TF can be seeded under a variety of crops, but is commonly seeded with spring wheat, or LL canola.

2) Seeding Rate

- Seed TF at 5-8 lbs/acre; at ½ inch depth.
- For planned stand of three years lower seeding rates may help delay TF from becoming sod bound, enhancing yields in later seasons.

3) Seeding Methods

- Separate pass (air drill) – seed TF immediately after cereal on an angle *Preferred method as it ensures both crops are seeded at correct depths and minimizes inter-row competition.
- One pass (air drill) – seed TF and LL canola in the same row.

Companion Crop Management

1) Planning

- TF is slower to establish and more sensitive to crop competition than other forage and turf species.
- The companion crop should be managed to minimize lodging as it can smother TF seedlings and limit the stubble needed to protect seedlings over winter.
- Early harvest of cover crops improves overwinter survival.

2) Crop/Variety Selection

- Choose a variety with a strong standability and choose an appropriate seeding rate to minimize lodging.
- It is beneficial to reduce the seeding rates of TF companion crops to reduce competition.

3) Fertility

- Apply extra phosphate up to seed-safe levels with the cover crop to have available for TF the following year.
- Manage companion crop nitrogen fertility to minimize the risk of lodging.

4) Pesticides

- Consult with your seed production specialist on herbicide options.
- Do not use PRE-HARVEST GLYPHOSATE.
- Apply fungicides and insecticides as normal.

5) Growth Regulator

- Consider using a growth regulator on your companion crop when applicable to minimize lodging.

6) Harvest

- Swath/combine or straight cut as normal.
- Leave 8-10” stubble to protect seedlings over winter.

7) Residue

- Cover crop residue management is critical to avoid smothering TF seedlings.
- Chop and spread the residue evenly.
- If baling straw, ensure it is completed in a timely manner.
- A light harrow may be required to break up excessive trash and germinate volunteers.

Crop Nutrition

1) Target Yield

- Set a target yield and fertilize the crop to reach yield target. A soil test helps to establish starting rates. Your seed production specialist can help assess the yield potential of your field and help develop an appropriate yield goal and fertility plan. Yield target: 1000 lbs/ac Fertility 120-30-30

2) Rates

- Target 120-150 lbs actual nitrogen to achieve maximum yield. TF yields have a linear relationship with increasing nitrogen rates but need to manage crop lodging.

3) Timing

- Post Harvest
    - A post-harvest application of nitrogen can help to initiate tiller growth to enhance yield.
- Fall/Spring
    - The fall/spring fertility application is intended to provide the nutrients to grow the next crop.
    - Application timing options:
        1. **Split** – 30-50% applied fall, 50-70% applied in spring *preferred method as it insures nitrogen is available in early spring when plants break dormancy while minimizing potential nitrogen losses over winter and providing more timing flexibility for spring applications.
        2. **Fall** – 100% applied late fall.
        3. **Spring** – 100% applied very early spring as TF utilizes nutrients early in the season.

Tall Fescue Nutrient Application Plan				
Year	**Timing**	**N**	**P**	**K**
0	At Seeding	According to companion crop needs	Up to the safe level	Up to the safe level
0	Fall/Spring	120-150 lbs	30 lbs	30 lbs
First Harvest				
1	Post Harvest	25-30 lbs		
1	Fall/Spring	120-150 lbs	30 lbs	30 lbs
Second Harvest - If keeping the field for 3rd harvest continue with fertility plan				
2	Post Harvest	25-30 lbs		
2	Fall/Spring	120-150 lbs	30 lbs	30 lbs

4) Application

- When possible, apply nitrogen before a rain to improve soil infiltration and minimize losses.
- Use a nitrogen stabilizer to minimize losses.

Crop Protection

1) Herbicides

- Consult Seed Production Specialist for list of acceptable products/refer to provincial crop protection guide.
- Good options for broadleaf weed control, but few grass options.
- Spot spraying and mowing can be used to manage weed problem areas.
- Establishment year: Fall herbicide application can be applied to control broadleaf weeds.
- Harvest years: Apply in spring when weeds are actively growing but prior to heading out of TF.

2) Growth Regulator

- Application of a growth regulator to TF helps to reduce lodging, speed up harvest, and increase yield. While not a common practice in TF, it may be beneficial in high-yield conditions.
- Timing – apply in spring when 2nd node is visible on tillers, need to watch application timing especially in dry years.
- Product - Trinexapac-ethyl (Moddus) at rates between 0.69 – 1.38 L/acre

3) Fungicide

- Fungicides are effective in reducing disease pressure and increasing yields. A fungicide application is recommended in average to above average yield environments to protect against leaf and stem rust.
- Timing – apply after crop has headed out, prior to/onset of flowering.
- Rate – label rate for rust control.

4) Insecticide

- Not normally necessary in TF. If insect pressure is above threshold, apply insecticide at label rate. Pests to watch for:
  - Cereal armyworm: can arrive in early July and start feeding.
  - Cutworms: watch for bare patches in the spring.
  - Grasshoppers: keep watch all season for populations moving in.

Harvest

1) Swathing

- TF must be swathed to avoid seed shatter.
- Crop timing – 35 to 45% moisture (Mid July); Your Seed Production Specialist will help determine swath timing.
- Time of day – preferable to avoid the heat of the day. Non lodged crops can be cut at night.

Crop Protection

2) Combining

- Combining can commence as soon as 4 days after swathing, dependent on weather, swath size, and crop biomass.
- Seed Moisture – begin combining when seed moisture is below 14%.
- Combine Settings – TF threshes easily but can be a challenge to separate out. Combine capacity is typically limited by cleaning. Consider using a drop pan to measure harvest losses and change one setting at a time. Some general settings:
    - Concaves opened ½”
    - Lower fan speed
    - Tighter sieve (top close to wheat, bottom like flax)
- Residue – Spread chaff evenly

3) Storage

- Use aeration to dry and cool seed after harvest.
- Do not use heat, as it can reduce seed germination.
- Seed must be 12% moisture or less for safe long-term storage.
- Bin Space – 1,000 lb/acre TF crop is equivalent to 50 bu/acre.
- Turn seed in bin is a good practice when seed moisture is higher.

Post Harvest Field Management

1) Residue management

- Spread crop residue evenly across field at harvest.
- Straw can be dropped and baled but must be done in a timely manner.
- A light harrow may be required on larger biomass crops to evenly spread residue.
- If fall regrowth is large, it can be cut and baled.
- Producers using TF residue for feed/bedding need to manage use to minimize issues with endophytes in turf types TF.

2) Post-Harvest Fertilizer Application

- Apply 25-30 lbs of N shortly after harvest to maximize fall tiller development.
- Application just prior to rainfall will help to move N into the soil.

3) Perennial weed control:

- Fall herbicide application in late September when weeds are still actively growing can help manage perennial weeks. Follow label rates.

4) Fall/Spring Fertilizer Application:

- Apply fertilizer in late fall or early spring for the next season's crop according to your yield goal.
- The TF stand can handle a late fall fertilizer application after the crop has gone dormant.

Post-Harvest Crop Removal and Re-Cropping

1) Crop Removal:

- Apply a minimum 1.5L/acre of glyphosate post-harvest once TF regrowth has started.
- Burn – Field can be burned in fall or spring to remove remaining crop residue. Follow provincial guidelines for crop burning.
- Tillage – must be completed in fall. 2 or 3 passes may be required.
- No Till – seed directly into burnt stubble with no-till drill or planter.

2) Re-cropping:

- It is recommended to stay out of cereals for the first year. The best cropping options following TF are crops where grass herbicides can be applied:
    - Soybeans
    - Canola
    - Peas