

# FALL RYE

SECALE CEREALE L. - BIENNIAL GRASS



## PRODUCTION GOALS

Not Effective (4 bars)      Very Effective (5 bars)

Quick Growth	5 bars
Lasting Residue	5 bars
Soil Builder	5 bars
Nitrogen Fixation	n/a
Nitrogen Scavenging	5 bars
Erosion Reduction	5 bars
Compaction Reduction	4 bars
Biofumigation Potential	4 bars
Weed Suppression	4 bars
Forage Harvest Value	4 bars
Grain Harvest Value	4 bars

Fall Rye has an upright growth habit and a medium depth fibrous root. Extremely winter hardy, fall rye requires a period of prolonged cold temperatures before becoming reproductive. It can tolerate low-fertility, acidic and wet soils making it an excellent choice for marginal land. Fall rye begins growing quickly in the spring allowing for rapid soil coverage.

## TOLERANCES

Flood	4 bars
Heat	4 bars
Drought	4 bars
Shade	4 bars
Low Fertility	5 bars
Salinity	4 bars
Optimal pH	4.8 - 8.0

## SOIL DRAINAGE CLASS

Very Well	5 bars
Well	4 bars
Moderately Well	3 bars
Somewhat Poor	2 bars
Poorly	1 bar
Very Poorly	0 bars

## AREA & ADAPTABILITY

Fall rye is a suitable fall-seeded annual for all regions of British Columbia. It is able to tolerate a wide range of conditions making it suitable for many field locations and soil types.

Winter Hardiness Zone - 4-9

## Seeding Considerations

Rate Drilled lbs/acre (kg/ha)	Rate Broadcast lbs./acre (kg/ha)	Depth in (cm)	Frost Seeding	Minimum Germination Temp °C (°F)	Seeds/lb (/kg)
60-120 lbs/ac (67-135 kg/ha)	90-160 lbs/ac (100-180 kg/ha)	0.5-2 in (1-5 cm)	Yes	1°C (34°F)	8600 (19,000)

Planting in late September has been shown to increase winter survivability compared to a late August planting date. Earlier planting dates allow for more ground cover going into the winter and earlier spring growth than very late planting dates.

## Management Considerations

Fall rye is a very adaptable cover crop with its excellent winter hardiness and rapid cool season growth. It can use significant amounts of moisture in the spring which can be an advantage or disadvantage depending on location and goals. It is also important to consider the amount of nitrogen immobilized by incorporating a large biomass cereal crop. Fall rye can also have some allelopathy affecting germination of weeds and subsequent crops (e.g. alfalfa). Hybrid fall rye varieties are available which can be seeded at a lower seeding rate with higher yields and lower ergot risk.

Fall rye is a risk for ergot. It is preferred over oats or spring barley by waterfowl in Delta, BC, in the late fall and early winter.

<b>Inter-seeding Potential</b>	
<b>Volunteer Establishment</b>	
<b>Nitrogen Concentration</b>	1.0 - 4.6%

### Dry Matter Yield

3000 - 9000 lbs/acre  
3360 - 10,800 kg/ha

## Termination

Fall Rye should be terminated at stem elongation. This minimizes the amount of nitrogen immobilization ensuring nitrogen is available for the next crop.

## References

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- Midwest Cover Crop Council.
- Odhiambo, J., Temple, W.D., A. Bomke. 2012. Managing Cover Crops for Conservation Purposes in the Fraser River Delta, British Columbia. In: Crop Management - Cases and Tools for Higher Yield and Sustainability.
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## Disclaimer

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