


- **High-yielding with rapid establishment**
- **Excellent high quality forage in spring & fall**
- **Extremely palatable**

Endo-Graze XL is a blend of improved tetraploid perennial ryegrass varieties. Best suited for short rotations of hay or pasture; can also be overseeded into older or thinning stands of alfalfa and other legumes.

 The XL designation represents branded products that meet the Forage First® high-quality standard. XL brands contain one or more improved varieties.

**FORAGE FIRST® FACTOR:** Perennial ryegrass is best suited for milder climates, where drought and elevated temperatures aren't as common. Although improved varieties offer increased disease resistance, crown rust can easily overtake a population (even with varieties that offer some protection). Perennial ryegrass includes both diploid and tetraploid varieties. Tetraploid varieties are usually taller, with wider leaves and longer tillers – offering greater production consistently. Tetraploids are commonly less dense, which makes them a good option when mixed with legumes. They also tend to be more effective in grazing environments, however they typically don't persist as long as diploid options. While diploids often have deeper crowns, which make them more tolerant to stress and traffic, they also provide better sod coverage, which is valuable for quick establishment in multiple soil environments.

## SEEDING RATES (LBS/ACRE)

MONOCULTURE  
MIX COMPONENT

**30 - 40**  
**6 - 10**

## SEED INFORMATION

SEEDS/LB **227,000**  
DEPTH (IN) **1/4 - 1/2**  
EMERGENCE (DAYS) **5 - 14**

## CHARACTERISTICS

ESTABLISHMENT	<b>FAST</b>	PALATABILITY	<b>HIGH</b>
PERSISTENCE	<b>MED</b>	YIELD POTENTIAL	<b>HIGH</b>
DROUGHT TOLERANCE	<b>MED</b>	GRAZING TOLERANCE	<b>HIGH</b>
WINTER HARDINESS	<b>MED</b>		

## PLANTING TIMES

SPRING PLANTING	<b>FEB - MAY</b>	LIFE CYCLE	<b>PERENNIAL</b>
FALL PLANTING	<b>AUG - SEP</b>		

## ADAPTATION

These grasses have a wide range of adaptability to soils, but thrive best on fertile soils with a pH between 5.5 to 6.5. They produce well in regions having mild climates. They do not withstand hot, dry weather or severe winters. They will stand fairly wet soils with reasonably good surface drainage. Perennial ryegrass is distributed throughout the entire United States.

## ESTABLISHMENT

Seed should be planted in a well prepared seedbed. In general, the perennial ryegrass component of a mix should be 20% or less since it is very competitive, due to rapid germination and good seedling vigor. Turf seeding rates are 5 to 7 lbs per 1000 sq ft for new lawns, 3 to 4 lbs per 1000 sq ft for established lawns and 30 to 35 lbs/1000 sq ft for overseeding.

## ROTATIONAL GRAZING

BEGIN (IN)	<b>8 - 12</b>	AVERAGE DAYS REST	<b>15 - 30</b>
STOP (IN)	<b>2 - 4</b>		

## HARVEST MANAGEMENT

Cut boot to mid-bloom.

Ryegrass is generally cut for hay when seed heads start to emerge. Allowing 7 to 10 inches of regrowth between grazings will benefit yield and persistence. On new seedings, harvest or grazing should be delayed until plants are 10 to 12 inches tall. Ryegrass responds well to good management, such as intensive rotational grazing and fertilizer applications. When used for turf, mowing height should be 1 to 2 inches. Mow frequently enough so no more than 1/3 of the total leaf area is removed. Perennial ryegrass requires moderate to high watering and moderate to high fertilizer requirements. Disease control measures may be needed depending on conditions during the growing season.

