



McKinley Annual Ryegrass

A newer winter-hardy variety with high yield and quality, McKinley came in close to the top of the charts for two years in a row in Penn State trials.

Fall Management

Excessive fall growth (greater than 10 inches) should be harvested, grazed or clipped to 4"

Expected growth – If properly seeded, one can expect to see 2-4" of top growth before a hard killing frost. Snow cover in northern areas will help protect annual ryegrass from winterkill. Even a thin stand with little fall growth may tiller and with good weather conditions in the spring may reach 4-8" in height by the second week of April. This is ideal time for the burndown to be applied, if using as a cover crop.

Grazing Dates

When plants reach 6 to 10". Under good growing conditions, the first grazing will be ready in approximately six weeks for late summer seedings. During the spring a rotation of 10 to 14 days is typical.

Silage Harvest Dates

Nov., mid-April, early May, and late May if not replanting quickly into alternative crop. Silage should be made when crop is about 15 to 20 inches or if coming into boot stage. Protein begins to drop after heading but not as severely as a small grain.

Crop Rotation

Ryegrass should be either moldboard plowed or sprayed with a minimum of 2 qt of glyphosate (Roundup) per acre to kill the plant. If not controlled, it may compete with the next crop. Annual and Italian Ryegrass can become a serious weed in small grains and is not recommended where small grains are grown for grain harvest. Paraquat (Gramoxone), chiseling or heavy discing will NOT control ryegrass.

At A Glance

- New and promising annual ryegrass
- High sugar, high fiber digestibility content
- Exceptional root growth
- More consistent winter hardiness

Establishment

Seeding Rate: 30-45 lb/acre, **25 to 30 lbs if seeded with a small grain**

Seeding Depth: 1/4"

Seeding Dates: Late summer to early fall. For a November harvest plant prior to September 7. If not planning a fall harvest, delay seeding to around Sept. 20th. In many years, can be planted as late as mid-October. (Dates for Southeastern PA—will vary with growing zone.)

Nitrogen Fertilization:

50 lbs at planting (can use manure)

50 lbs March during green up.

50 lbs after each machine harvest or 2 grazing cycles.



1828 Freedom Rd.
Suite 101
Lancaster, PA 17601
(717) 687-6224

High Energy Forages and Soil Building Cover Crops

Forage Tech Sheet



2016-17 PSU Short-Lived Cover Crops Trial Annual Ryegrass (multi-cut)

| Variety | Dm Yield tons/acre | | | | First Cutting | | | Second Cutting | | | Stand 20-Mar |
|-----------------|--------------------|--------|-------|-------|---------------|---------|--------|----------------|---------|--------|-----------------|
| | 28-Apr | 19-May | 9-Jun | Total | CP% | NDFD 30 | TTNDFD | CP% | NDFD 30 | TTNDFD | |
| Kodiak | 2.59 | 0.89 | 1.42 | 4.90 | 22.3 | 74 | 67 | 23.6 | 79 | 74 | 97 |
| MO-1 | 2.41 | 0.88 | 1.55 | 4.84 | 23.8 | 74 | 70 | 25.0 | 79 | 74 | 94 |
| Centurion | 2.29 | 0.93 | 1.62 | 4.84 | 22.3 | 71 | 67 | 23.2 | 78 | 73 | 95 |
| McKinley | 2.53 | 0.83 | 1.44 | 4.81 | 24.9 | 73 | 70 | 23.9 | 80 | 74 | 96 |
| M2CVS* | 2.30 | 0.95 | 1.50 | 4.75 | 22.5 | 74 | 68 | 24.7 | 81 | 76 | 96 |
| Andes | 2.14 | 1.21 | 1.28 | 4.64 | 23.8 | 72 | 70 | 21.1 | 73 | 67 | 95 |
| DSV-16-12* | 2.06 | 1.03 | 1.53 | 4.63 | 23.3 | 71 | 70 | 22.3 | 78 | 73 | 96 |
| DSV-16-15* | 1.93 | 1.15 | 1.50 | 4.58 | 22.7 | 75 | 70 | 23.2 | 80 | 73 | 93 |
| Winterhawk | 2.15 | 1.11 | 1.27 | 4.53 | 22.4 | 70 | 68 | 23.7 | 77 | 73 | 95 |
| DSV-16-13* | 1.92 | 1.17 | 1.44 | 4.53 | 21.7 | 71 | 68 | 21.1 | 75 | 69 | 95 |
| ME4* | 2.37 | 0.76 | 1.40 | 4.53 | 21.1 | 73 | 68 | 24.0 | 79 | 74 | 97 |
| Jackson | 2.42 | 0.78 | 1.32 | 4.52 | 23.0 | 72 | 69 | 24.7 | 79 | 74 | 95 |
| DSV-16-14* | 2.09 | 0.93 | 1.47 | 4.50 | 23.9 | 77 | 73 | 23.5 | 79 | 75 | 95 |
| KO14-WEAR* | 1.97 | 1.17 | 1.34 | 4.48 | 24.4 | 74 | 69 | 22.5 | 76 | 70 | 94 |
| Marshall | 2.07 | 0.88 | 1.51 | 4.47 | 22.1 | 71 | 67 | 22.3 | 79 | 76 | 93 |
| DSV-16-11* | 1.86 | 0.87 | 1.60 | 4.34 | 24.5 | 70 | 69 | 26.4 | 78 | 72 | 94 |
| BAR LM 15426* | 1.45 | 1.34 | 1.33 | 4.12 | 24.7 | 84 | 82 | 23.1 | 80 | 74 | 88 |
| BAR LM 15427* | 1.42 | 1.43 | 1.27 | 4.11 | 24.1 | 79 | 77 | 21.8 | 78 | 72 | 94 |
| WMWL* | 2.10 | 0.66 | 1.33 | 4.10 | 22.0 | 72 | 67 | 22.7 | 75 | 69 | 95 |
| ME94* | 2.17 | 0.78 | 1.14 | 4.09 | 21.4 | 71 | 68 | 23.7 | 77 | 71 | 97 |
| JUMBO | 1.63 | 1.31 | 1.09 | 4.02 | 26.0 | 77 | 79 | 22.2 | 76 | 70 | 94 |
| BAR LM 16168-1* | 1.67 | 1.17 | 1.11 | 3.95 | 24.4 | 78 | 71 | 22.3 | 76 | 71 | 93 |
| Nelson | 1.97 | 0.85 | 1.08 | 3.90 | 23.0 | 76 | 70 | 23.3 | 83 | 78 | 93 |
| BAR LM 16488* | 1.08 | 1.44 | 1.35 | 3.87 | 26.3 | 81 | 78 | 23.5 | 77 | 75 | 79 |
| BAR LM 16498* | 1.42 | 1.18 | 1.25 | 3.86 | 26.1 | 78 | 75 | 21.4 | 77 | 71 | 76 |
| BAR LM 15425* | 1.26 | 1.41 | 1.18 | 3.84 | 26.9 | 77 | 77 | 21.4 | 75 | 69 | 90 |
| BAR LM 16168-2* | 1.59 | 1.10 | 0.94 | 3.64 | 24.6 | 76 | 75 | 20.9 | 72 | 66 | 94 |
| BAR LM 14167-1* | 1.43 | 1.15 | 1.03 | 3.62 | 25.8 | 80 | 79 | 23.5 | 76 | 74 | 91 |
| BAR LM 15476* | 1.18 | 1.11 | 1.23 | 3.52 | 25.3 | 78 | 74 | 22.8 | 77 | 74 | 93 |
| BAR LM 16502* | 1.04 | 1.27 | 1.16 | 3.46 | 26.0 | 77 | 72 | 23.2 | 73 | 70 | 76 |
| BAR LM 14167-4* | 1.33 | 1.10 | 0.95 | 3.38 | 26.5 | 79 | 78 | 24.1 | 78 | 74 | 89 |
| OR-16-BRAG* | 0.53 | 1.39 | 1.17 | 3.09 | 24.8 | 74 | 70 | 20.2 | 67 | 64 | 83 |
| Mean | 1.82 | 1.07 | 1.31 | 4.20 | 24.0 | 75 | 72 | 23.0 | 77 | 72 | 92 |
| LSD (.05) | 0.20 | 0.13 | 0.16 | 0.30 | | | | | | | 3 |
| CV% | 7.88 | 8.49 | 8.78 | 5.16 | | | | | | | 4 |

*not commercially available
CV = coefficient of variation
LSD = least significant difference

- Planted September 15, 2016
- Yields (tons per acre DM basis)
- Stand score based on a scale of 1 to 100. A 100 is considered to be a perfect stand.
- Grand Mean, CV and LSD values represent 32 total entries.
- Means are LSMeans derived from statistical analysis.
- Rankings are based on total yields.



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