

BEFORE PLANTING ANNUAL RYEGRASS (ARG) AS A COVER CROP:

- Fields need to be weed free; winter annuals will compete with ARG
- Apply a low rate of herbicide before planting
- Don't use ARG in a field that will have winter wheat in the rotation

EQUIPMENT:

- **Drilling** gives quickest results with lowest rate of seed application (12 – 18 lb/ac)
 - Seed depth – ¼ - ½ inch
- **Broadcast** with airflow spreader allows mix of seed and fertilizer
 - Reduces time/expense of drilling
 - Concerns:
 - Requires 8 – 10 lb/ac more seed and good rainfall
 - Needs double spreading due to light ARG seed weight
- **Aerial** allows early broadcast of seed; more important in locations north of I-70
 - **Seed rate:** 18 – 25 lb/ac
 - **Pilot advisory:** avoid streaks & voids with an overlap spread pattern
 - **Corn** – seed cover crop after leaves turn yellow or brown
 - You need 50% sunlight on the ground for ARG establishment
 - **Soybeans** – seed when beans are yellow and after 1st leaf falls

SEEDING DATE AND FERTILIZING ARG:

- ARG is harder to germinate as temps cool in Sept/October. Best done in warm temps
- If seeding after corn/soybean harvest:
 - Above I-70 – Late August – Sept. 15
 - Below I-70 – Sept 10 – Oct 1
- Add 30lb/ac Nitrogen (or manure) to simulate quick stands and improved hardiness
- If established early, roots will still be beneficial even if the crop winterkills

GROWTH & DEVELOPMENT:

- Even if stand looks thin, it will develop roots all winter and develop quickly in spring
- By Mid-April, most root growth has occurred
 - 1st year ARG – 28 – 31" in fragipan & claypan soils; 48 – 50" in better soil
 - After 3 years no-till and ARG – roots are 45 – 60"; top growth less than 1 ft.

RYEGRASS CONTROL:

- **When?**
 - best done late March/early April – w/ the plant < 8" tall w/no node developed
 - before Noon, dry weather, warmer than 50°F – best for plant uptake
- **Using glyphosate?**
 - Good spray coverage w/med. spray droplet size and good pressure is key
 - Air induction spray systems not advised
 - Reduce water volume to 10 gal/ac for best control
 - Plan 2 applications of full-rate herbicide; you don't want a regrowth of ARG
 - Killing ARG early minimizes grass residue, maximizes sun\soil contact, ARG decomposition and quick release of available nitrogen to the system
 - If ARG gets to the flower stage, it's easy to control BUT there's a high probability that the seed will be viable and produce "escapes" in the field.



Annual Ryegrass' deep roots allow subsequent corn and soybean roots to find additional moisture.



Annual Ryegrass reduces the need for tilling, thus reducing tractor hours and the amount of fuel used.



Aerial seeding into a standing crop just prior to leaf drop is one method of broadcasting seed.



With Annual Ryegrass, corn production more than doubled that planted with no cover crop in a dry year.

- **Planting Corn after ARG?**
 - Use 2 – 3 pints/ac of glyphosate, with ammonium sulfate and surfactant
 - Check your water's pH – use citric acid to lower pH to 4.6 – 5.2 for best kill
 - Mix additives to water first (full tank); agitate for 5 min. before adding glyphosate
 - Don't add atrazine or Calisto to glyphosate! You'll cut effectiveness by 40%
 - Add 1 lb/ac simazine (Princep, Balance Pro, etc) for better weed control
 - Gramoxone is only 70-85% effective, worse after node development
 - ARG "escapes" are controlled with labeled rates of Accent, Steadfast, Option
 - Best control when temps above 70°F
- **Planting Soybeans after ARG?**
 - Glyphosate/additives recipe same as above, when planting corn
 - Early kill of ARG allows quick decomposition, thus a good seed bed for beans
 - Using RR seed allows easier control of ARG "escapes" w/glyphosate
 - You can also use Fusion, Select or Post Plus



Converting to no-till with cover crops requires new management know-how.



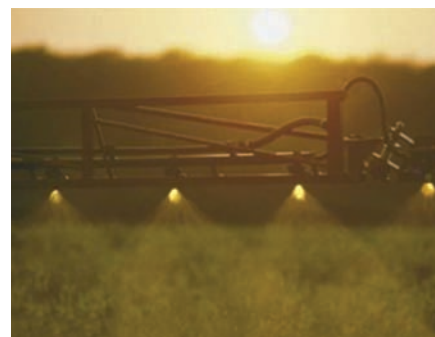
Preliminary research suggests Annual Ryegrass may also curtail soybean cyst nematode.

SUMMARY:

- Using Annual Ryegrass requires good management practices
- It must be seeded on time and burned down on time
- Late planting reduces effective cover crop and limits soil benefits
- Late spraying can result in poor control and more residue, resulting in:
 - Slower decomposition of residue
 - Slower warming of the soil and less subsoil moisture
 - Reduced crop production and higher cost

POTENTIAL BENEFITS:

- Significant positive changes in soil properties
- Improved soil conditions allowing greater crop rooting
- Increased soil tilth and water infiltration
- Better soil aggregation
- Reduce or eliminate soil erosion
- Increase crop yields, especially in years of low rainfall.



Flat fan nozzles are best for burndown application on Annual Ryegrass.



To receive a **FREE DVD** on maximizing the benefits of annual ryegrass contact info@ryegrass.com or 503-364-2944



Paid for by the Oregon Ryegrass Growers Seed Commission, an agency of the State of Oregon.

For information on using and managing Annual Ryegrass as a cover crop, visit:

RyegrassCoverCrop.com