Rye

Rye is a cold-tolerant grain that germinates in cool soil (34-40°F), making it a major fall-planted cover crop in the Northeast for winter erosion control. The crop prefers well-drained soils but will tolerate heavy clays and acid soils. Rye has a well-developed fibrous root system that reduces leaching of soil nitrate. The top growth provides soil cover and suppresses weeds; however, it can be difficult to control in the spring.

**Land Preparation**
Prepare a seedbed free of clods and weeds. If tillage is impossible, rye can be broadcast on moist, un-tilled ground. Additional fertilizer is usually not needed, especially when following vegetables.

**Seeding Rate**

<table>
<thead>
<tr>
<th>Date</th>
<th>Drill</th>
<th>Broadcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/15</td>
<td>60</td>
<td>85 lb/ac.</td>
</tr>
<tr>
<td>9/22</td>
<td>100</td>
<td>140</td>
</tr>
<tr>
<td>10/1</td>
<td>140</td>
<td>200</td>
</tr>
<tr>
<td>10/15</td>
<td>180</td>
<td>250</td>
</tr>
</tbody>
</table>

Drill 1 to 1½ inches deep. After broadcasting, cover 1 inch. Rye is often mixed with legumes as a nurse crop. In fall, use 70 lb/ac. rye with 20-25 lb/ac. hairy vetch. In the spring, use 60 lb/ac. rye with 15 lb/ac. medium red clover.

**Seeding Date**
September 15 - October 10 for winter cover.
October 15 for spring cover.
April 15 as a nurse crop for clover.

**Seed Sources**
Local seed dealers, Seedway, AgriCulver, local farmers (if the seed is weed-free).

**Maintenance**
None.

**Control**
Terminate early in spring for vegetable production, ideally at 6 to 8 inches height. Wet, warm spring weather can cause quick growth and make incorporation difficult and suppress the crops that follow. Terminate with herbicide (e.g. 1 lb/ac. glyphosate) when the rye is 6-8 inches tall, and allow to decompose for 3-4 weeks. Without herbicide, plow down early. Plants may regrow if crowns are large. A later mechanical termination is possible by mowing after all the tillers are to the boot stage (typically early May). The roller-crimper method has not been an effective termination method in New York.

**Tips**
Some crops are suppressed following rye, from allelopathy, nutrient tie-up and other effects. Wait at least two weeks after incorporation before planting vegetables. Wheat may be preferred as a cover crop to reduce this risk.

References
1 Soil Health Series, Rodale Institute Research Center, Fact Sheet # 12, 1993.

Disclaimer
This fact sheet reflects the current (and past) authors’ best effort to interpret a complex body of scientific research, and to translate this into practical management options. Following the guidance provided in this fact sheet does not assure compliance with any applicable law, rule, regulation, or standard.

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http://covercrop.net

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