

Section 5 of 22 (5c - Cover Crops Guide)

<p><b>Example Cover Crop: Rye</b>  <b>Planning considerations:</b> Crop Rotations, Minimum-Till (No-Till), Irrigation Water Mgt., Nutrient Mgt., Integrated Pest Mgt., Demonstrations, etc.</p>		Poor	Fair	Good	V. Good	Excellent	<p><b>Cover Crops Assessed (Chart 1):</b> Annual ryegrass, Barley, Oats, Rye, Wheat, Buckwheat, Sorghum-sudangrass, Mustards, Radish, Rapeseed, Berseem clover, cowpeas, Crimson clover, Field peas, Hairy vetch, Medics, Red clover, Subterranean clover, Sweetclovers, White clover and Woollypod vetch.</p>						
<p><b>Performance and Roles Chart 2</b></p>		<p>Legume N Source: n/a                  Total N (lb./ac.): n/a                  Dry Matter (lb./ac./yr.): 3,000 – 10,000</p>				<p><b>Chart 2 continued (additional information)</b>  <b>Total N:</b> Total N from all plant.  <b>Soil Builder:</b> Organic Matter yield and soil structure improvement. <b>Good Grazing:</b> Production, nutritional quality and palatability. Note: feeding pure legumes can cause bloat. <b>Duration:</b> Length of vegetative stage. <b>Harvest Value:</b> Economic value as forage, seed or grain. <b>Cash Crop Interseeded:</b> Rates how well the cover crop will perform with an appropriate companion crop.</p>							
		<p>Erosion Fighter</p>				<p><b>Planting (Chart 3 B)</b> <b>Species:</b> Rye  <b>Cost (\$/lb.):</b> 0.18 – 0.50 <b>Cost/ac:</b> \$25.0 <b>Depth (in.):</b> ¼ - 2"</p>							
		<p>Weed Fighter</p>				<p><b>Seeding Rate (lb./ac.):</b> 60 – 120 <b>Drilled (D) or Broadcast (B):</b> (D)</p>							
		<p>Good Grazing</p>				<p><b>Inoculant Type:</b> n/a The recommended inoculant for each legume</p>							
		<p>Quick Growth</p>				<p><b>Re-seeds:</b> (S) Rates the likelihood of a cover crop reestablishing through self-reseeding if it's allowed to mature &amp; set seed:</p>							
		<p>Lasting Residue</p>				<p>Reliably (R), Usually (U), Sometimes (S) or Never (N) (Ref. pg. 70)</p>							
		<p>Duration</p>				<p><b>Chart 3 A continued:</b></p>							
		<p>Forage</p>				<p><b>Type:</b> Biennial, Cool Season Annual, Long-lived perennial, Summer Annual, Short-lived Perennial, Winter Annual. <b>Hardy through Zone:</b> 3 See USDA Hardiness Zone Map pg.1 (NFT = Not Frost Tolerant). <b>Habit:</b> Climbing, Upright, Prostrate, Semiprostrate, and Semiupright. <b>pH preferences:</b> 5.0 – 7.0, pg. 69. <b>Best Established:</b> Early/Mid/Late Spring, Summer, Fall &amp; Winter. <b>Minimum Soil Temperature:</b> 34 F (i.e., for successful germination &amp; establishment; pg. 69)</p>		Problem	Could be a Moderate Problem	Could be a Minor Problem	Occasionally a Minor Problem	Not a Problem	
		<p>Seed or Grain</p>											
		<p>Cash Crop Interseeded</p>											
		<p><b>Cultural Traits Chart 3A Tolerances</b></p>		<p>Heat</p>									
				<p>Drought</p>									
<p>Shade</p>													
<p>Flood</p>													
<p>Low Fert.</p>													
<p><b>Potential Advantages Chart 4A</b></p>		<p><b>Soil Impact</b></p>		<p>Subsoiler</p>									
				<p>Free P &amp; K</p>									
				<p>Loosen Topsoil</p>									
		<p><b>Soil Ecology</b></p>		<p>Nematodes</p>									
				<p>Disease</p>									
				<p>Allelopathic</p>									
		<p><b>Other</b></p>		<p>Choke Weeds</p>									
				<p>Attract Beneficials</p>									
				<p>Bears Traffic</p>									
				<p>Short Windows</p>									
		<p><b>Soil Ecology:</b> Rates a cover's ability to fight pests by suppressing or limiting damage from nematodes, and soil disease from fungal or bacterial infection, or weeds (i.e., by allelopathic action).</p>				<p><b>Potential Disadvantages Chart 4 B</b></p>		<p><b>Increased Pest Risks</b></p>		<p>Weed Potential</p>			
		<p>Insects, Nematodes</p>											
		<p>Crop Disease</p>											
<p><b>Management Challenges</b></p>		<p>Hinder Crops</p>											
		<p>Establish</p>											
		<p>Till-Kill</p>											
		<p>Mow-Kill</p>											
		<p>Mature Incorporation</p>											
<p><b>NOTE on Increased Pest Risk (Chart 4 B):</b> "Overall, growing a cover crop rarely causes pest problems, but certain cover crops may contribute to particular pest, disease or nematode problems in localized areas, for example, by serving as an alternate host to the pest." pg. 65 (Refer to the above-mentioned guide, for individual cover crop overview/narratives).</p>							<p><b>Increased Pest Risks:</b> Relative likelihood of a cover crop becoming a weed, or contributing to a likely pest risk. <b>Mgt. Challenges:</b> Incorporation will be easier when a stand is killed before maturity or after some time elapses between killing and incorporating (pg. 65)</p>						
							<p>Info. Source: Managing Cover Crops Profitably, 3<sup>rd</sup> Edition; Charts are on pages 66 -72                  rudy.garcia.2009</p>						