Crop returns and costs vary considerably throughout Missouri. The following budgets represent potential returns/costs for fescue seed and hay production in southern Missouri. To customize the budget for your own farm, adjust yields and costs to represent your individual production system and farm productivity.

**Income Per Acre**

Fescue seed production costs per unit and net returns are highly dependent on variable yields and volatile seed prices. The following budget includes three yield levels, representing land of varying quality with similar levels of production management. Land values have been adjusted to represent varying levels of land productivity. The budgets use a seed price of $0.25 per pound, however price can vary significantly from year-to-year. Hay harvested following seed harvest is mature and of lower quality. In most years, hay supplies are adequate and prices tend to be low—especially for lower quality hay. Many producers also stockpile late summer growth to be used for fall or winter pasture.

**Cost Per Acre**

Crop production costs vary depending upon the production system. Table 1 identifies typical seed, fertilizer and herbicide requirements (rate and cost/unit) for the various yield levels. Establishment costs are not included in these budgets, if desired they may be calculated and annualized over expected stand life. Typical annual dry fertilizer applications are shown. Liming costs include application and are annualized based on three tons applied every six years. The price of lime varies depending upon ENM and hauling distance. Adjustments should be made for your own farm’s soil test nutrient levels or other fertilizer sources.

Machinery costs are based on a typical fescue seed/hay production system with field operations identified in Table 2. Economic engineering approach estimates are used for machinery and labor operation costs. Fescue seed is typically harvested on a 50/50 custom share basis where the custom operator receives one-half of the fescue seed for

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**Table 1. Production Inputs — Fescue Seed/Hay**

<table>
<thead>
<tr>
<th>Item</th>
<th>250</th>
<th>350</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed, lbs</td>
<td></td>
<td></td>
<td>$0.00/lb</td>
</tr>
<tr>
<td>Fertilizer:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (anhydrous)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N (liquid/dry)</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>P</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>K</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Lime (3 ton-6years)</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Herbicide</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Insecticide / Fungicide</td>
<td></td>
<td></td>
<td>$12.00/ton</td>
</tr>
<tr>
<td>Pounce</td>
<td></td>
<td></td>
<td>$1.21/oz</td>
</tr>
</tbody>
</table>

---

**Table 2. Machinery and Land Resources — Fescue Seed/Hay**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Yield Level (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>250</td>
</tr>
<tr>
<td>Tillage/Planting/Chemical</td>
<td></td>
</tr>
<tr>
<td>Applications:</td>
<td></td>
</tr>
<tr>
<td>Mower conditioner</td>
<td>1</td>
</tr>
<tr>
<td>Raking</td>
<td>1</td>
</tr>
<tr>
<td>Dry fertilizer application</td>
<td>2</td>
</tr>
<tr>
<td>Insecticide / fungicide application</td>
<td>0</td>
</tr>
<tr>
<td>Harvest</td>
<td></td>
</tr>
<tr>
<td>Baling (large round)</td>
<td>2.7</td>
</tr>
<tr>
<td>Hauling (large round)</td>
<td>2.7</td>
</tr>
<tr>
<td>Combining (50/50 custom share)</td>
<td>125</td>
</tr>
<tr>
<td>Non-machinery labor</td>
<td>1.50</td>
</tr>
<tr>
<td>Land value/acre</td>
<td>$620</td>
</tr>
<tr>
<td>Interest on capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.00%</td>
</tr>
<tr>
<td></td>
<td>7.50%</td>
</tr>
</tbody>
</table>
harvesting. Fertilizer application and baling were estimated using custom rates. Hauling costs are based on custom hauling charges.

Land costs are based on owned land. If the land is cash rented, the actual cash rent per acre should be used as land cost. If land is rented through a crop share arrangement, shared costs and returns should be shown as they are split.

### Acknowledgments
These budgets were prepared with input from the following committee: UMC Agriculture Economists — Joe Parcell, Ray Massey and Joe Horner; University Outreach and Extension Regional Specialists — Stacy Hambelton, Charles Chaney, Thomas Hansen, Eugene Schmitz; UMC Student — Todd Gerlt

## COST-RETURN PROJECTION — FESCUE SEED/FESCUE HAY — SOUTHERN MISSOURI

<table>
<thead>
<tr>
<th><strong>INCOME PER ACRE</strong></th>
<th><strong>250</strong></th>
<th><strong>350</strong></th>
<th><strong>500</strong></th>
<th><strong>Your Farm</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Yield per acre</td>
<td>$0.25</td>
<td>$0.25</td>
<td>$0.25</td>
<td></td>
</tr>
<tr>
<td>B. Price per pound</td>
<td>$45.00</td>
<td>$45.00</td>
<td>$45.00</td>
<td></td>
</tr>
<tr>
<td>C. Net government payment</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>D. Hay (1½ tons @ $30/ton)</td>
<td>$107.50</td>
<td>$142.50</td>
<td>$180.00</td>
<td></td>
</tr>
<tr>
<td>E. 2 AUM @ $5</td>
<td>$10.00</td>
<td>$10.00</td>
<td>$10.00</td>
<td></td>
</tr>
<tr>
<td>F. Returns/acre ((A × B) + C + D + E)</td>
<td>$179.37</td>
<td>$198.34</td>
<td>$217.60</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>COSTS PER ACRE</strong></th>
<th><strong>Your Farm</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Seed</td>
<td>$</td>
</tr>
<tr>
<td>2. Herbicide</td>
<td>$</td>
</tr>
<tr>
<td>3. Insecticide / Fungicide</td>
<td>$</td>
</tr>
<tr>
<td>4. Fertilizer and Lime</td>
<td>$</td>
</tr>
<tr>
<td>5. Crop Consulting</td>
<td>$</td>
</tr>
<tr>
<td>6. Crop Insurance</td>
<td>$</td>
</tr>
<tr>
<td>7. Drying</td>
<td>$</td>
</tr>
<tr>
<td>8. Miscellaneous</td>
<td>$</td>
</tr>
<tr>
<td>9. Custom Hire / Machinery Expense</td>
<td>$</td>
</tr>
<tr>
<td>10. Non-machinery Labor</td>
<td>$</td>
</tr>
<tr>
<td>11. Irrigation</td>
<td>$</td>
</tr>
<tr>
<td>a. Labor</td>
<td>$</td>
</tr>
<tr>
<td>b. Fuel and Oil</td>
<td>$</td>
</tr>
<tr>
<td>c. Repairs and Maintenance</td>
<td>$</td>
</tr>
<tr>
<td>d. Depreciation on Equipment and Well</td>
<td>$</td>
</tr>
<tr>
<td>e. Interest on Equipment</td>
<td>$</td>
</tr>
<tr>
<td>12. Land Charge / Rent</td>
<td>$</td>
</tr>
<tr>
<td>G. SUB TOTAL</td>
<td>$173.56</td>
</tr>
<tr>
<td>13. Interest on ½ Nonland Costs</td>
<td>$</td>
</tr>
<tr>
<td>H. TOTAL COSTS</td>
<td>$179.37</td>
</tr>
<tr>
<td>I. RETURNS OVER COSTS (F - H)</td>
<td>$</td>
</tr>
<tr>
<td>J. TOTAL COSTS/POUND (H ÷ A)</td>
<td>$</td>
</tr>
<tr>
<td>K. RETURN TO ANNUAL COST (I + 13) + G</td>
<td>$</td>
</tr>
</tbody>
</table>

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University of Missouri, College of Agriculture, Food and Natural Resources

FMB-3401 December 2002

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