Utah State University
Extension Economics

Costs and Returns per acre from growing alfalfa hay, 2006
Utah County

Receipts

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity per acre</th>
<th>Unit</th>
<th>Price/cost per unit</th>
<th>Value/cost per acre</th>
<th>Base Value</th>
<th>Your Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa hay</td>
<td>4.3</td>
<td>tons</td>
<td>$88.57</td>
<td>$380.84</td>
<td>$380.84</td>
<td>$380.84</td>
</tr>
<tr>
<td>Residue</td>
<td>-</td>
<td>AUM</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$380.84</td>
<td>$380.84</td>
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</tbody>
</table>

Operating costs

- **Fertilization**
  - Phosphate (11-52-0)
    - 96 pounds: $0.18 x 96 = $17.14
  - Potash (0-0-60)
    - 50 pounds: $0.15 x 50 = $7.50
  - Custom application
    - 1 acre: $7.82 x 1 = $7.82
- **Pesticides/herbicides**
  - Furadan
    - 1 pint: $10.50 x 1 = $10.50
  - Custom application
    - 1 acre: $7.82 x 1 = $7.82
- **Irrigation (wheel line)**
  - 5 irrigations: $10.00 x 5 = $50.00
- **Labor**
  - 1.67 hours: $10.00 x 1.67 = $16.67
- **Water assessment**
  - 1 share: $10.00 x 1 = $10.00
- **Repairs/maintenance**
  - 1 acre: $2.30 x 1 = $2.30
- **Pumping**
  - 37 acre inch: $0.00 x 37 = $0.00
- **Harvesting**
  - Swathing
    - 3 acre: $4.03 x 3 = $12.10
  - Turning/raking
    - 3 acre: $1.39 x 3 = $4.18
  - Baling
    - 4.30 tons: $4.79 x 4.30 = $20.60
  - Hauling/stacking
    - 4.30 tons: $3.63 x 4.30 = $15.61
- **Crop insurance (75% Yield, 100% Price)**
  - 1 acre: $17.22 x 1 = $17.22
- **Interest on operating capital**
  - 7.61%: $3.48 x 1 = $3.48

**Subtotal**: $152.93 + $12.67 = $165.59

Ownership costs (excludes cost of land)

- Insurance
  - 1 acre: $2.00 x 1 = $2.00
- Machinery ownership costs
  - 1 acre: $126.25 x 1 = $126.25
- Irrigation equipment costs
  - 1 acre: $8.25 x 1 = $8.25

**Total costs**: $136.50 + $126.25 + $8.25 = $263.00

Net returns to owner for unpaid labor, management, equity and risk

- Above operating costs: $227.91 + $136.50 = $364.41
- Above total costs: $227.91 + $263.00 = $490.91

Breakeven Table - Alfalfa

<table>
<thead>
<tr>
<th>Yield (Ton/Ac)</th>
<th>Selling Price ($/ton)</th>
<th>$78.57</th>
<th>$83.57</th>
<th>$88.57</th>
<th>$93.57</th>
<th>$98.57</th>
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<tbody>
<tr>
<td>2.80</td>
<td>$79.69</td>
<td>$93.69</td>
<td>$107.69</td>
<td>$121.69</td>
<td>$135.69</td>
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<tr>
<td>3.30</td>
<td>$114.76</td>
<td>$131.26</td>
<td>$147.76</td>
<td>$164.26</td>
<td>$180.76</td>
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<tr>
<td>3.80</td>
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<td>$206.83</td>
<td>$225.83</td>
<td>$245.83</td>
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<tr>
<td>4.30</td>
<td>$184.91</td>
<td>$206.41</td>
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<td>$249.41</td>
<td>$270.91</td>
<td>$294.41</td>
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<tr>
<td>4.80</td>
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<tr>
<td>5.30</td>
<td>$255.05</td>
<td>$281.55</td>
<td>$308.05</td>
<td>$334.55</td>
<td>$361.05</td>
<td>$390.05</td>
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<td>5.80</td>
<td>$290.13</td>
<td>$319.13</td>
<td>$348.13</td>
<td>$377.13</td>
<td>$406.13</td>
<td>$437.13</td>
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</tbody>
</table>

Assumptions

1. Alfalfa already established. Harvested in June, August, September.
2. Interest computed on fertilization/herbicide costs for 6 months and operating costs for 3 months.
3. Machinery operating costs include: fuel, oil, repairs and labor.
4. Machinery ownership costs are allocated based on equipment used for each crop.
5. Machinery ownership costs include depreciation, interest, insurance, and housing.

Budget prepared by: E. Bruce Godfrey, Cody Bingham and Dean Miner