



**2003 ALFALFA HAY PRODUCTION BUDGET**  
**Direct Spring Seeding - 4 Year Stand <sup>1</sup>**

ITEM	EXPLANATION			PRICE PER UNIT	YIELD (ton/A) <sup>2</sup>			YOUR BUDGET
					3.0	4.5	6.0	
<b>RECEIPTS <sup>3</sup></b>								
Alfalfa Hay - High Quality	60% of yield			\$100 /ton	\$180	\$270	\$360	_____
Alfalfa Hay - Lower Quality	40% of yield			\$60 /ton	\$72	\$108	\$144	_____
Total Alfalfa Receipts					\$252	\$378	\$504	_____
<b>VARIABLE COSTS</b>								
Seed <sup>4</sup>	15 pounds			4.00 /lb	15	15	15	_____
Fertilizer <sup>5</sup>								
N (lbs.)	0	0	0	0.24 /lb	0	0	0	_____
P <sub>2</sub> O <sub>5</sub> (lbs)	40	60	80	0.24 /lb	10	14	19	_____
K <sub>2</sub> O(lbs)	95	145	190	0.13 /lb	12	19	25	_____
Lime(ton)	0.5			12 /ton	6	6	6	_____
Chemicals <sup>6</sup>					30	30	30	_____
Fuel, Oil, Grease <sup>7</sup>					12	12	12	_____
Repairs <sup>8</sup>					17	17	17	_____
Miscellaneous <sup>9</sup>					16	17	18	_____
Int. on Oper. Cap. <sup>10</sup>	6 mo			9.0%	5	6	6	_____
Hired Labor <sup>11</sup>					0	0	0	_____
<b>TOTAL VARIABLE COSTS</b>	<b>-Per Acre</b>				123	136	148	_____
	<b>-Per Ton</b>				41	30	25	_____
<b>FIXED COSTS</b>								
Labor Charge <sup>11</sup>	6.5 hours			9.00 /hour	59	59	59	_____
Mach. And Equip. Charge <sup>12</sup>					34	34	34	_____
Seedbed Preparation/Seeding Costs - Custom Hire <sup>13</sup>					14	14	14	_____
Land Charge <sup>14</sup>					50	70	90	_____
Management Charge	5% of gross revenue				13	19	25	_____
<b>TOTAL FIXED COSTS</b>					169	195	221	_____
<b>TOTAL COSTS</b>	<b>-Per Acre</b>				292	331	370	_____
	<b>-Per Ton</b>				97	74	62	_____
<b>RETURN ABOVE VARIABLE COSTS</b>					129	242	356	_____
<b>RETURN ABOVE TOTAL COSTS</b>					(40)	47	134	_____
<b>RETURN TO LABOR AND MANAGEMENT <sup>15</sup></b>					31	124	218	_____

- <sup>1</sup> Does not include storage costs.
- <sup>2</sup> Assumes a 2.5 ton yield in seeding year; yields of approximately 3, 5, and 7 tons, respectively, in the following years; middle yield shown reflects weighted average.
- <sup>3</sup> Based on 86% DM alfalfa hay. Alfalfa Hay quality will often vary over the growing season. High quality alfalfa is assumed to be harvested at optimum maturity and condition. Lower quality alfalfa is assumed to be harvested at less than optimum maturity and/or condition. 60% of crop is assumed to be harvested at optimum conditions.
- <sup>4</sup> Expenses associated with seeding are prorated over the four-year stand life.
- <sup>5</sup> Annual application of maintenance fertilizer. 5-10 lb. of N. could be added at seeding. Soil test values of CEC=20, P=25 ppm, K=150 ppm. Prices were quoted in October, 2002. Fertilizer prices vary over time and by area. Check with local sources for current prices.
- <sup>6</sup> Based on use of Baythroid, Poast, and Butyrac. An additional fall herbicide treatment may be necessary in some areas. Additional insect control may be necessary in some years.
- <sup>7</sup> See table below for specific calculations. Lubrication costs are assumed to be 15% of fuel costs.
- <sup>8</sup> See table below for specific calculations.
- <sup>9</sup> Includes twine, other supplies, utilities, soil tests, small tools, crop insurance, etc...
- <sup>10</sup> Interest charged for 6 months at 9% interest rate.
- <sup>11</sup> Part or all of labor may be a variable cost if paid labor varies with acres farmed. It's a fixed cost if labor costs do not change with acres farmed. It's a fixed cost if labor costs do not change with acres farmed.
- <sup>12</sup> Reflects 500 acres, conservation tillage. See table below for details.
- <sup>13</sup> Seedbed preparation and seeding costs are charged at custom hire rates and prorated over 4 years. The following rates are included: Plowing-\$13, Field Cultivate-\$8, Cultimulch-\$9, Spray(3x)-\$5, Seeding-\$12.
- <sup>14</sup> Average based on 1999 data. Land charges vary throughout the state, check your local rates.
- <sup>15</sup> Return to labor and management is the revenue less total expenses except operator labor and management. It is a measure of the returns to the operator's labor and management.

---

### Machinery Inventory

---

	Number times used	Cost	Acres/ Hr	Fuel* (\$/A)	Repair s (\$/A)
Mower	4	\$16,300	6.55	\$2.00	1.72
Hay Baler	4	\$16,800	4.4	1.60	7.76
Hay Wagon (2)	4	\$7,000	4.4	4.80	4.00
Hay Rake	4	\$4,600	3.5	2.00	1.40
75 HP Tractor		\$30,300			1.14
60 HP Tractor		\$24,300			0.97
Pickup Truck (1/2)		\$12,500		0.10	0.05
<b>Total per Acre</b>		<b>111,800</b>		<b>10.50</b>	<b>17.04</b>
Fixed Costs Rate	15%				
<b>Mach. And Equip Charge =</b>		<b>\$34</b>		<b>Price of Diesel Fuel</b>	<b>\$1.00 /gal</b>

---

Machinery and Equipment charge = Total Machine Inventory Cost x Fixed Costs Rate / 500 acres  
 =\$111,800 x 15% / 500 acres = \$34/acre

Machines are all assumed to be new and in the first year of use. Older/used machines will likely have lower machinery costs. Size of operation will also effect cost of machinery per acre. For an analysis on machine costs for different sized operations, see economies of scale budgets in this publication

Fixed costs rate includes depreciation, interest, housing, and insurance.

\*Fuel calculations are based on the implement plus tractor.