

# **2012 COSTS OF PRODUCING ALFALFA HAY UNDER CENTER PIVOT IRRIGATION IN THE COLUMBIA BASIN OF WASHINGTON STATE**

Steve Norberg, J. Shannon Neibergs<sup>1</sup>



1 Authors all at Washington State University: Steve Norberg, Regional Forage Specialist and J. Shannon Neibergs Extension Economist.

**Table 1. 2012 Input Cost Assumptions for Producing Alfalfa**

<b>Item</b>	<b>Unit</b>	<b>Price/unit</b>
<b>Fuel:</b>		
Diesel	gal	\$4.00
Gas	gal	\$3.85
<b>Seed:</b>		
Alfalfa seed	lb	\$4.00
<b>Fertilizer:</b>		
Dry Nitrogen	lb	\$0.49
Dry Phosphate	lb	\$1.17
Dry Potash	lb	\$0.70
Dry Sulfur	lb	\$0.38
Zinc	lb	\$2.84
Boron	lb	\$6.40
<b>Pesticides:</b>		
Raptor	ounce	\$5.61
Velpar Alfamax	lb	\$16.70
<b>Labor:</b>		
Hourly machine labor	hour	\$20.00
<b>Land Cost:</b>		
Cash rent	hour	\$300.00
<b>Interest Rates:</b>		
Operating loan	percent	6.50%
Machinery loan	percent	7.50%

**Table 2. Schedule of Operations for Establishing Alfalfa Hay Following Wheat or Barley in the Columbia Basin, Center Pivot Irrigation**

Month	Operation	Tooling	Materials/Service
Fall	Irrigation	Center Pivot Leased with Land	\$14.40 Power, \$16.20 Water, \$3.60 Labor, \$5.40/Acre Repair (36% Annual Cost)
August	Disc and Pack	250HP-WT, 26' Tandem Disc and Pack	Custom hired \$50 per acre 2 passes through field
August	Soil Test	Custom	\$0.30/Acre
August	Fertilize	Custom Ground Application	\$9.00/Acre, Fertilizer approx. \$206/Acre
August	Plant	150HP-WT, 20' Double Disc Drill	20 lbs Alfalfa Seed @ \$4/lb

**Table 3. Production Costs for Establishing Alfalfa Hay in Fall Following Wheat or Barley in the Columbia Basin, Center Pivot Irrigation**

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Variable Costs</b>				
<b>Seed:</b>				<b>\$98.00</b>
Alfalfa Seed	20	lb	\$4.00	\$80.00
Custom Seeding	1	acre	\$18.00	\$18.00
<b>Fertilizer:</b>				<b>\$215.58</b>
Dry Nitrogen	0	lb	\$0.49	\$0.00
Dry Phosphate	92	lb	\$0.90	\$82.89
Dry Potash	140	lb	\$0.64	\$89.66
Dry Sulfur	25	lb	\$0.28	\$7.04
Zinc	5	lb	\$2.84	\$14.20
Boron	2	lb	\$6.40	\$12.79
Custom Application	1	acre	\$9.00	\$9.00
<b>Pesticides:</b>				<b>\$42.63</b>
Herbicide - Raptor	6	oz	\$5.61	\$33.63
Herbicide Custom Application	1	acre	\$9.00	\$9.00
<b>Custom Work:</b>				<b>\$50.30</b>
Soil Test	1	acre	\$0.30	\$0.30
Custom Disc and Pack 2X	1	acre	\$50.00	\$50.00
				\$0.00
				\$0.00
<b>Irrigation:</b>				<b>\$39.60</b>
Irrigation Power-CP	0.36	acre	\$40.00	\$14.40
Water Access	0.36	acre	\$45.00	\$16.20
Irrigation Repairs	0.36	acre	\$15.00	\$5.40
Irrigation Labor-CP	0.18	acre	\$20.00	\$3.60
<b>Other:</b>				<b>\$18.46</b>
Fuel	2.50	gal	\$4.00	\$10.00
Lubricants	1	acre	\$1.22	\$1.22
Machinery Repairs	1	acre	\$2.24	\$2.24
Machinery Labor	0.25	acre	\$20.00	\$5.00
				\$0.00
				\$0.00
Overhead				\$23.23
Operating Interest				\$12.58
<b>Total Variable Costs</b>				<b>\$500.38</b>

**Table 3. Production Costs for Establishing Alfalfa Hay in Fall Following Wheat or Barley in the Columbia Basin, Center Pivot Irrigation**

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<b>Fixed Costs:</b>	
Machinery depreciation	\$6.33
Machinery interest	\$4.24
Machinery insurance, taxes housing, license	\$2.25
Land Cost	\$0.00
<b>Total Fixed Costs</b>	<b>\$12.82</b>
Fixed Costs per Unit	
<b>Total Costs per Acre</b>	<b>\$513.20</b>

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Notes:

Land cost are allocated to the preceding wheat/barley crop and all straw has been removed.

**Table 4. Production Costs for Alfalfa Hay Year 1 Following Establishment, Center Pivot Irrigation, Large (1-ton) Bales, Custom Haying**

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	8	ton	\$200.00	\$1,600.00
<b>Operating Inputs</b>				
<b>Fertilizer:</b>				<b>\$0.00</b>
Dry Nitrogen	0	lb	\$0.49	\$0.00
Dry Phosphate	0	lb	\$1.17	\$0.00
Dry Potash	0	lb	\$0.70	\$0.00
Dry Sulfur	0	lb	\$0.38	\$0.00
<b>Pesticides:</b>				<b>\$0.00</b>
Herbicides may or may not be required after establishment.				\$0.00
<b>Custom Work:</b>				<b>\$368.00</b>
Swath	4	acre	\$20.00	\$80.00
Rake	4	acre	\$10.00	\$40.00
Bale 3x4x8	8	ton	\$17.00	\$136.00
Haul and Stack	8	ton	\$9.00	\$72.00
Tarping	8	ton	\$5.00	\$40.00
				\$0.00
				\$0.00
<b>Irrigation:</b>				<b>\$110.00</b>
Irrigation Power-CP	1	acre	\$45.00	\$45.00
Water Access	1	acre	\$40.00	\$40.00
Irrigation Repairs	1	acre	\$15.00	\$15.00
Irrigation Labor-CP	0.5	acre	\$20.00	\$10.00
<b>Other:</b>				<b>\$32.72</b>
Gopher control	1	acre	\$5.00	\$5.00
Fuel	2.28	gal	\$4.00	\$9.12
Lubricants	1	acre	\$0.80	\$0.80
Machinery Repairs	1	acre	\$1.80	\$1.80
Haystack Insurance	8	ton	2	\$16.00
				\$0.00
				\$0.00
Overhead				\$25.54
Operating Interest				\$19.36
<b>Total Variable Costs</b>				<b>\$555.62</b>

**Table 4. Production Costs for Alfalfa Hay Year 1 Following Establishment, Center Pivot Irrigation, Large (1-ton) Bales, Custom Haying**

Variable Costs per Unit					\$69.45
<b>Net Returns Above Variable Costs</b>					<b>\$1,044.38</b>
<b>Fixed Costs:</b>					
Machinery depreciation					\$5.42
Machinery interest					\$3.08
Machinery insurance, taxes housing, licence					\$2.79
Management (5% of Total Cost)					\$43.35
Establishment Cost					\$193.77
Land Cost	1	acre	\$300.00		\$300.00
<b>Total Fixed Costs</b>					<b>\$548.41</b>
Fixed Costs per Unit					\$68.55
<b>Total Costs per Acre</b>					<b>\$1,104.03</b>
Total Cost per Unit					\$138.00
<b>Estimated Net Return</b>					<b>\$495.97</b>
Notes:					

**Table 5. Production Costs for Alfalfa Hay in the Columbia Basin, Center Pivot Irrigation, Large (1-ton) Bales Years 2 and 3, Custom Haying**

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	8	ton	\$200.00	\$1,600.00
<b>Operating Inputs</b>				
<b>Fertilizer:</b>				<b>\$215.88</b>
Dry Nitrogen	0	lb	\$0.49	\$0.00
Dry Phosphate	92	lb	\$0.90	\$82.89
Dry Potash	140	lb	\$0.64	\$89.66
Dry Sulfur	25	lb	\$0.28	\$7.04
Zinc	5	lb	\$2.84	\$14.20
Boron	2	lb	\$6.40	\$12.79
Custom Application	1	acre	\$9.00	\$9.00
Soil Test	1	acre	\$0.30	\$0.30
<b>Pesticides:</b>				<b>\$42.40</b>
Herbicide - Velpar Alfamax	2	lb	\$16.70	\$33.40
Custom Application	1	acre	\$9.00	\$9.00
<b>Custom Work:</b>				<b>\$368.00</b>
Swath	4	acre	\$20.00	\$80.00
Rake	4	acre	\$10.00	\$40.00
Bale 3x4x8	8	ton	\$17.00	\$136.00
Haul and Stack	8	ton	\$9.00	\$72.00
Tarping	8	ton	\$5.00	\$40.00
<b>Irrigation:</b>				<b>\$110.00</b>
Irrigation Power-CP	1	acre	\$45.00	\$45.00
Water Access	1	acre	\$40.00	\$40.00
Irrigation Repairs	1	acre	\$15.00	\$15.00
Irrigation Labor-CP	0.5	acre	\$20.00	\$10.00
<b>Other:</b>				<b>\$32.72</b>
Haystack Insurance	8	ton	\$2.00	\$16.00
Gopher control	1	acre	\$5.00	\$5.00
Fuel	2.28	gal	\$4.00	\$9.12
Lubricants	1	acre	\$0.80	\$0.80
Machinery Repairs	1	acre	\$1.80	\$1.80
				\$0.00
				\$0.00
Overhead				\$38.45
Operating Interest				\$24.99



**Table 5. Production Costs for Alfalfa Hay in the Columbia Basin, Center Pivot Irrigation, Large (1-ton) Bales Years 2 and 3, Custom Haying**

<b>Total Variable Costs</b>				<b>\$832.44</b>
Variable Costs per Unit				\$104.06
<b>Net Returns Above Variable Costs</b>				<b>\$767.56</b>
<b>Fixed Costs:</b>				
Machinery depreciation				\$5.42
Machinery interest				\$3.08
Machinery insurance, taxes housing, license				\$2.79
Management (5% of Total Cost)				\$57.19
Establishment Cost				\$193.77
Land Cost	1	acre	\$300.00	\$300.00
<b>Total Fixed Costs</b>				<b>\$562.25</b>
Fixed Costs per Unit				\$70.28
<b>Total Costs per Acre</b>				<b>\$1,394.69</b>
Total Cost per Unit				\$174.34
<b>Estimated Net Return</b>				<b>\$205.31</b>

Notes:

**Table 8. Breakeven Analysis for Large (1-ton) Bales Years 2 and 3**

<b>Breakeven Analysis:</b>	-	Base	+
	10%		10%
		Yield	
<u>Price Breakeven</u>	7.2	8	8.8
Operating Cost Breakeven	116	104	95
Ownership Cost Breakeven	78	70	64
Total Cost Breakeven	194	174	158
		Price	
<u>Yield Breakeven</u>	\$180.00	\$200.00	\$220.00
Operating Cost Breakeven	4.6	4.2	3.8

**Table 5. Production Costs for Alfalfa Hay in the Columbia Basin, Center Pivot Irrigation, Large (1-ton) Bales Years 2 and 3, Custom Haying**

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Ownership Cost Breakeven	3.1	2.8	2.6
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**Table 6. Production Costs for Alfalfa Hay in the Columbia Basin, Center Irrigation, Small Two Tie Bales Year 1, Custom Haying**

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	8	ton	\$220.00	\$1,760.00
<b>Operating Inputs</b>				
<b>Fertilizer:</b>				<b>\$0.00</b>
Dry Nitrogen	0	lb	\$0.49	\$0.00
Dry Phosphate	0	lb	\$1.17	\$0.00
Dry Potash	0	lb	\$0.70	\$0.00
Dry Sulfur	0	lb	\$0.38	\$0.00
<b>Pesticides:</b>				<b>\$0.00</b>
Herbicides may or maynot be required after establishment.				\$0.00
				\$0.00
<b>Custom Work:</b>				<b>\$446.00</b>
Swath	4	acre	\$20.00	\$80.00
Rake	4	acre	\$10.00	\$40.00
Bale 2 Tie 80 lb bales	200	bale	\$0.95	\$190.00
Haul and Stack	200	bale	\$0.40	\$80.00
Tarping	8	ton	\$7.00	\$56.00
				\$0.00
				\$0.00
<b>Irrigation:</b>				<b>\$110.00</b>
Irrigation Power-CP	1	acre	\$45.00	\$45.00
Water Access	1	acre	\$40.00	\$40.00
Irrigation Repairs	1	acre	\$15.00	\$15.00
Irrigation Labor-CP	0.5	acre	\$20.00	\$10.00
<b>Other:</b>				<b>\$32.72</b>
Gopher control	1	acre	\$5.00	\$5.00
Fuel	2.28	gal	\$4.00	\$9.12
Lubricants	1	acre	\$0.80	\$0.80
Machinery Repairs	1	acre	\$1.80	\$1.80
Haystack Insurance	8	ton	\$2.00	\$16.00
				\$0.00
				\$0.00
Overhead				\$29.44
Operating Interest				\$22.32
<b>Total Variable Costs</b>				<b>\$640.48</b>
Variable Costs per Unit				\$80.06

**Net Returns Above Variable Costs** **\$1,119.52**

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**Fixed Costs:**

Machinery depreciation				\$5.42
Machinery interest				\$3.08
Machinery insurance, taxes housing, license				\$2.79
Management (5% of Total Cost)				\$47.59
Establishment Cost				\$193.77
Land Cost	1	acre	\$300.00	\$300.00

**Total Fixed Costs** **\$552.65**

Fixed Costs per Unit \$69.08

**Total Costs per Acre** **\$1,193.13**

Total Cost per Unit \$149.14

**Estimated Net Return** **\$566.87**

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Notes:

**Table 7. Production Costs for Alfalfa Hay in the Columbia Basin, Center Pivot Irrigation, Small Two Tie Bales Years 2 and 3, Custom Haying**

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	8	ton	\$220.00	\$1,760.00
<b>Operating Inputs</b>				
<b>Fertilizer:</b>				<b>\$215.88</b>
Dry Nitrogen	0	lb	\$0.49	\$0.00
Dry Phosphate	92	lb	\$0.90	\$82.89
Dry Potash	140	lb	\$0.64	\$89.66
Dry Sulfur	25	lb	\$0.28	\$7.04
Zinc	5	lb	\$2.84	\$14.20
Boron	2	lb	\$6.40	\$12.79
Custom Application	1	acre	\$9.00	\$9.00
Soil Test	1	acre	\$0.30	\$0.30
<b>Pesticides:</b>				<b>\$42.40</b>
Herbicide - Velpar Alfamax	2	lb	\$16.70	\$33.40
Custom Application	1	acre	\$9.00	\$9.00
				\$0.00
<b>Custom Work:</b>				<b>\$446.00</b>
Swath	4	acre	\$20.00	\$80.00
Rake	4	acre	\$10.00	\$40.00
Bale 2 Tie 80 lb bales	200	bale	\$0.95	\$190.00
Haul and Stack	200	bale	\$0.40	\$80.00
Tarping	8	ton	\$7.00	\$56.00
<b>Irrigation:</b>				<b>\$110.00</b>
Irrigation Power-CP	1	acre	\$45.00	\$45.00
Water Access	1	acre	\$40.00	\$40.00
Irrigation Repairs	1	acre	\$15.00	\$15.00
Irrigation Labor-CP	0.5	acre	\$20.00	\$10.00
<b>Other:</b>				<b>\$32.72</b>
Haystack Insurance	8	ton	\$2.00	\$16.00
Gopher control	1	acre	\$5.00	\$5.00
Fuel	2.28	gal	\$4.00	\$9.12
Lubricants	1	acre	\$0.80	\$0.80
Machinery Repairs	1	acre	\$1.80	\$1.80
				\$0.00
				\$0.00
Overhead				\$42.35
Operating Interest				\$27.53

**Table 7. Production Costs for Alfalfa Hay in the Columbia Basin, Center Pivot Irrigation, Small Two Tie Bales Years 2 and 3, Custom Haying**

<b>Total Variable Costs</b>				<b>\$916.88</b>
Variable Costs per Unit				\$114.61
<b>Net Returns Above Variable Costs</b>				<b>\$843.12</b>
<b>Fixed Costs:</b>				
Machinery depreciation				\$5.42
Machinery interest				\$3.08
Machinery insurance, taxes housing, license				\$2.79
Management (5% of Total Cost)				\$61.41
Establishment Cost				\$193.77
Land Cost	1	acre	\$300.00	\$300.00
<b>Total Fixed Costs</b>				<b>\$566.47</b>
Fixed Costs per Unit				\$70.81
<b>Total Costs per Acre</b>				<b>\$1,483.35</b>
Total Cost per Unit				\$185.42
<b>Estimated Net Return</b>				<b>\$276.65</b>

Notes:

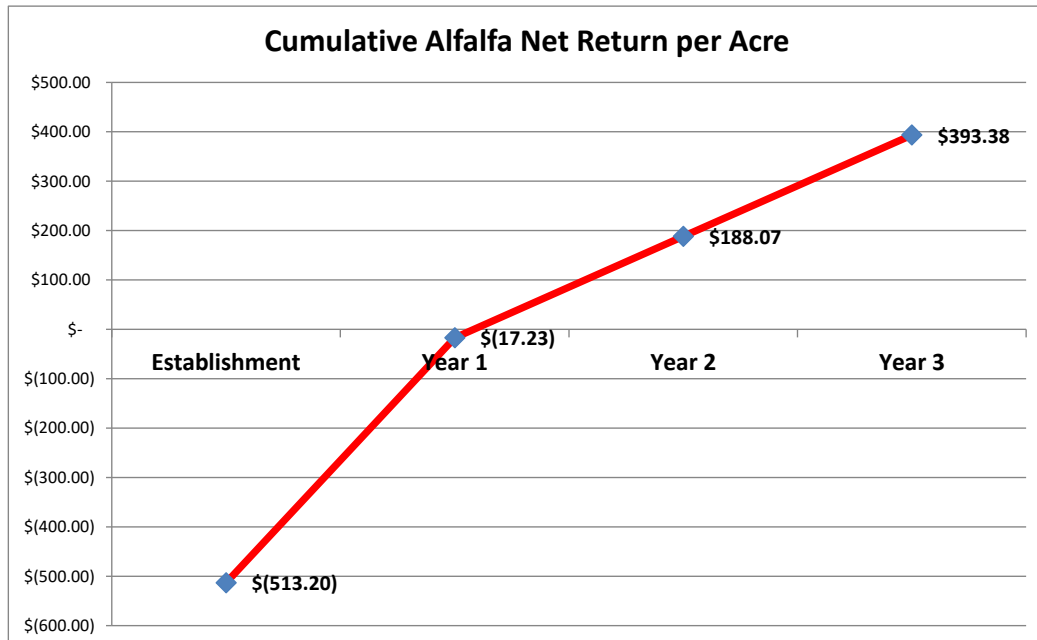
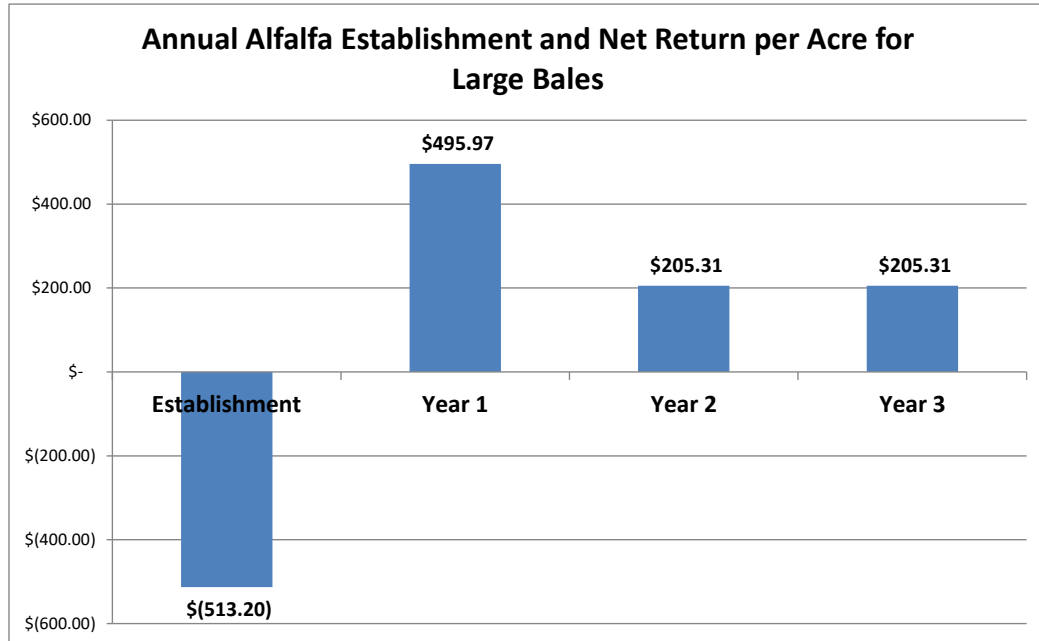
**Breakeven Analysis:**

	- 10%	Base Yield	+ 10%
<u>Price</u>	7.2	8	8.8
Operating Cost Breakeven	127	115	104
Ownership Cost Breakeven	79	71	64
Total Cost Breakeven	206	185	169

	Price		
<u>Yield</u>	\$198.00	\$220.00	\$242.00
Operating Cost Breakeven	4.6	4.2	3.8
Ownership Cost Breakeven	2.9	2.6	2.3
Total Cost Breakeven	7.5	6.7	6.1

	Annual	Cumulative	IRR	NPV
Establishment	\$ (513.20)	\$ (513.20)	44%	\$309.80
Year 1	\$ 495.97	\$ (17.23)		
Year 2	\$ 205.31	\$ 188.07		
Year 3	\$ 205.31	\$ 393.38		



**TABLE 9. SHORT FORM ESTABLISHMENT - FALL SEEDING**

	<b>LABOR, MACHINERY, CUSTOM HIRE \$/acre</b>	<b>MATERIALS \$/acre</b>	<b>TOTAL \$/acre</b>	<b>YOUR FIGURES</b>
<b>CULTURAL OPERATIONS: *1</b>				
Disc and Pack 2X	\$25.00		\$50.00	_____
Fertilizing *2	\$9.30	\$206.58	\$215.88	_____
Plant Seed cost 20 lbs/a @ \$4/lb	\$18.00	\$80.00	\$98.00	_____
Herbicide Raptor (6 oz. full labeled rate)	\$9.00	\$33.63	\$42.63	_____
Irrigation (labor & pivot cost) *3	\$23.40	\$16.20	\$39.60	_____
<b>OTHER CHARGES:</b>				
Fuel, Repairs, Labor and other expenses	\$5.00	\$13.46	\$18.46	_____
General Overhead *4			\$23.23	_____
Operating Capital Interest 6.50%, 6 mo			\$12.58	_____
Fixed Costs - Depreciation, Insurance, Taxes, etc. *5			\$12.82	_____
Total Establishment Cost			\$513.20	_____
Amortized Est. Costs (3 yrs. @ 6.50%)*6			\$193.77	_____
Notes:				
<ol style="list-style-type: none"> <li>1. The first year expenses for these or equivalent operations are accounted for in the fall seeded establishment year, and amortized over the alfalfa stand's production period.</li> <li>2. Fertilizer amount was calc. using soil test from the Othello variety plots and current prices. Fertilizer price includes 92 lb. P2O5, 140 lb. K2O, 25 lb. Sulfur, 5 lb. Zinc and 1 lb. Boron.</li> <li>3. 36% of estimated annual total irrigation costs</li> <li>4. Estimated at 5% of all costs.</li> <li>5. Land rent not charged on establishment year</li> <li>6. Amortized establishment costs over 4 year productive life would be \$149.80.</li> </ol>				



**TABLE 10. SHORT FORM YEAR 1 FOLLOWING ESTABLISHMENT PRODUCTION LARGE BALES**

<b>GROSS RETURNS:</b>	<b>YIELD Tons/acre</b>	<b>PRICE \$/ton</b>	<b>GROSS RETURN \$/acre</b>	<b>YOUR FIGURES</b>
Alfalfa Hay	8	\$200.00	\$1,600.00	_____
<b>CULTURAL OPERATIONS:</b>	<b>LABOR, MACHINERY, CUSTOM HIRE \$/acre</b>	<b>MATERIALS \$/acre</b>	<b>TOTAL \$/acre</b>	<b>YOUR FIGURES</b>
Fertilizing	\$0.00	\$0.00	\$0.00	_____
Herbicide Ap.	\$0.00	\$0.00	\$0.00	_____
Irrigation (Labor and Pivot Expenses)	\$65.00	\$45.00	\$110.00	_____
Gopher Control	\$3.00	\$2.00	\$5.00	_____
<b>HAYING:</b>				
Swathing 4X	\$20.00		\$80.00	_____
Raking 4X	\$10.00		\$40.00	_____
Baling (\$17.00/ton)	\$17.00		\$136.00	_____
Haul and Stack (\$9.00/ton)	\$9.00		\$72.00	_____
Tarpping (\$5.00/ton)	\$5.00		\$40.00	_____
Hay Insurance		\$16.00	\$16.00	_____
<b>OTHER CHARGES:</b>				
Fuel, Repairs, Labor and other expenses	\$1.80	\$9.92	\$11.72	_____
General Overhead 5% of variable costs			\$25.54	_____
Operating Capital Interest 6.50%, 6 mo			\$19.36	_____
Fixed Costs - Depreciation, Insurance, Taxes, etc.			\$11.29	_____
Management Return			\$43.35	_____
Land Cost			\$300.00	_____
Amortized Establishment Cost			\$193.77	_____
<b>TOTAL COST PER ACRE PER YEAR</b>			\$1,104.03	_____
<b>NET RETURN PER ACRE PER YEAR</b>			\$495.97	_____
Notes:				

**TABLE 11. SHORT FORM YEARS 2 and 3 FULL PRODUCTION LARGE BALES**

<b>GROSS RETURNS:</b>	<b>YIELD Tons/acre</b>	<b>PRICE \$/ton</b>	<b>GROSS RETURN \$/acre</b>	<b>YOUR FIGURES</b>
Alfalfa Hay	8	\$200.00	\$1,600.00	_____
<b>CULTURAL OPERATIONS:</b>	<b>LABOR, MACHINERY, CUSTOM HIRE \$/acre</b>	<b>MATERIALS \$/acre</b>	<b>TOTAL \$/acre</b>	<b>YOUR FIGURES</b>
Fertilizing	\$9.30	\$206.58	\$215.88	_____
Herbicide Ap. (2 lb/a Velpar Alfamax)	\$9.00	\$33.40	\$42.40	_____
Irrigation (Labor and Pivot Expenses)	\$65.00	\$45.00	\$110.00	_____
Gopher Control	\$3.00	\$2.00	\$5.00	_____
<b>HAYING:</b>				
Swathing 4X	\$20.00		\$80.00	_____
Raking 4X	\$10.00		\$40.00	_____
Baling (\$17.00/ton)	\$17.00		\$136.00	_____
Haul and Stack (\$9.00/ton)	\$9.00		\$72.00	_____
Tarpping (\$5.00/ton)	\$5.00		\$40.00	_____
Hay Insurance		\$16.00	\$16.00	_____
<b>OTHER CHARGES:</b>				
Fuel, Repairs, Labor and other expenses	\$1.80	\$9.92	\$11.72	_____
General Overhead 5% of variable costs			\$38.45	_____
Operating Capital Interest 6.50%, 6 mo			\$24.99	_____
Fixed Costs - Depreciation, Insurance, Taxes, etc.			\$11.29	_____
Management Return			\$57.19	_____
Land Cost			\$300.00	_____
Amortized Establishment Cost			\$193.77	_____
<b>TOTAL COST PER ACRE PER YEAR</b>			\$1,394.69	_____
<b>NET RETURN PER ACRE PER YEAR</b>			\$205.31	_____
Notes:				

**TABLE 12. SHORT FORM YEAR 1 FOLLOWING ESTABLISHMENT SMALL 2 TIE BALES**

<b>GROSS RETURNS:</b>	<b>YIELD Tons/acre</b>	<b>PRICE \$/ton</b>	<b>GROSS RETURN \$/acre</b>	<b>YOUR FIGURES</b>
Alfalfa Hay	8	\$220.00	\$1,760.00	_____
<b>CULTURAL OPERATIONS:</b>	<b>LABOR, MACHINERY, CUSTOM HIRE \$/acre</b>	<b>MATERIALS \$/acre</b>	<b>TOTAL \$/acre</b>	<b>YOUR FIGURES</b>
Fertilizing	\$0.00	\$0.00	\$0.00	_____
Herbicide Ap.	\$0.00	\$0.00	\$0.00	_____
Irrigation (Labor and Pivot Expenses)	\$65.00	\$45.00	\$110.00	_____
Gopher Control	\$3.00	\$2.00	\$5.00	_____
<b>HAYING:</b>				
Swathing 4X	\$20.00		\$80.00	_____
Raking 4X	\$10.00		\$40.00	_____
Baling (\$0.95/bale 80 lb bales)	\$0.95		\$190.00	_____
Haul and Stack (\$0.40/bale)	\$0.40		\$80.00	_____
Tarpping (\$7.00/ton)	\$7.00		\$56.00	_____
Hay Insurance		\$16.00	\$16.00	_____
<b>OTHER CHARGES:</b>				
Fuel, Repairs, Labor and other expenses	\$1.80	\$9.92	\$11.72	_____
General Overhead 5% of variable costs			\$29.44	_____
Operating Capital Interest 6.50%, 6 mo			\$22.32	_____
Fixed Costs - Depreciation, Insurance, Taxes, etc.			\$11.29	_____
Management Return			\$47.59	_____
Land Cost			\$300.00	_____
Amortized Establishment Cost			\$193.77	_____
<b>TOTAL COST PER ACRE PER YEAR</b>			\$1,193.13	_____
<b>NET RETURN PER ACRE PER YEAR</b>			\$566.87	_____
Notes:				

**TABLE 13. SHORT FORM YEARS 2 and 3 FULL PRODUCTION SMALL 2 TIE BALES**

<b>GROSS RETURNS:</b>	<b>YIELD Tons/acre</b>	<b>PRICE \$/ton</b>	<b>GROSS RETURN \$/acre</b>	<b>YOUR FIGURES</b>
Alfalfa Hay	8	\$220.00	\$1,760.00	_____
<b>CULTURAL OPERATIONS:</b>	<b>LABOR, MACHINERY, CUSTOM HIRE \$/acre</b>	<b>MATERIALS \$/acre</b>	<b>TOTAL \$/acre</b>	<b>YOUR FIGURES</b>
Fertilizing	\$9.30	\$206.58	\$215.88	_____
Herbicide Ap. (2 lb/a Velpar Alfamax)	\$9.00	\$33.40	\$42.40	_____
Irrigation (Labor and Pivot Expenses)	\$65.00	\$45.00	\$110.00	_____
Gopher Control	\$3.00	\$2.00	\$5.00	_____
<b>HAYING:</b>				
Swathing 4X	\$20.00		\$80.00	_____
Raking 4X	\$10.00		\$40.00	_____
Baling (\$0.95/bale 80 lb bales)	\$0.95		\$190.00	_____
Haul and Stack (\$0.40/bale)	\$0.40		\$80.00	_____
Tarpping (\$7.00/ton)	\$7.00		\$56.00	_____
Hay Insurance		\$16.00	\$16.00	_____
<b>OTHER CHARGES:</b>				
Fuel, Repairs, Labor and other expenses	\$1.80	\$9.92	\$11.72	_____
General Overhead 5% of variable costs			\$42.35	_____
Operating Capital Interest 6.50%, 6 mo			\$27.53	_____
Fixed Costs - Depreciation, Insurance, Taxes, etc.			\$11.29	_____
Management Return			\$61.41	_____
Land Cost			\$300.00	_____
Amortized Establishment Cost			\$193.77	_____
<b>TOTAL COST PER ACRE PER YEAR</b>			\$1,483.35	_____
<b>NET RETURN PER ACRE PER YEAR</b>			\$276.65	_____
Notes:				