

Hay



A COMPARISON
of

SWATHER

vs.

SWATHER AND RAKE

vs.

MOW AND RAKE

by
Carl W. Rimbey, Farm Advisor
and
A. Doyle Reed, Extension Economist

University of California - Agricultural Extension Service
Plumas-Sierra Counties Cooperating
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SUMMARY

1. Total Cost per Ton Comparison

<u>Tons</u>	<u>Swather</u>	<u>Swather and Rake</u>	<u>Mower and Rake</u>
100	\$22.39	\$27.51	\$23.01
200	14.65	16.96	15.32
300	12.07	13.44	12.76
400	10.78	11.69	11.48
500	10.01	10.63	10.71
600	9.49	9.92	10.21
700	9.12	9.42	9.83

2. On a total cost basis the swather is the cheapest method of harvesting hay.

3. On an operating cost basis the swather and rake was the cheapest method because it cut down the time spent in baling.

	<u>Swather</u>	<u>Swather and Rake</u>	<u>Mower and Rake</u>
Cost per ton	\$3.41	\$2.91	\$4.13

4. The high overhead costs of the swathe and rake method of haying makes it the most expensive method of haying.

	<u>Swather</u>	<u>Swather and Rake</u>	<u>Mower and Rake</u>
Annual Overhead Costs	\$1547.50	\$2110.00	\$1537.50

5. Wire was charged at \$1.00 per ton and hauling at \$2.50 per ton.

6. The time used for each operation are the averages of actual time growers spent on an acre. These varied with each grower.

7. These records also indicate that the small irregular fields are increasing the time for each operation. Leveling fields and removing natural obstacles could result in 10 to 50 percent reduction in operating costs and allow equipment to be used on a larger acreage.

8. Increased yields per acre will also cut down on the cost per ton.

COSTS USING SWATHER

Investment

Annual Costs

		<u>Depreciation</u>	<u>Interest</u>	<u>Miscellaneous</u>	<u>Total</u>
Swather	\$3,700	\$462.50	\$111.00	\$74.00	\$647.50
Baler	3,000	300.00	90.00	60.00	450.00
Tractor	3,000	300.00	90.00	60.00	450.00
	<u>\$9,700</u>	<u>\$1062.50</u>	<u>\$291.00</u>	<u>\$194.00</u>	<u>\$1547.50</u>

Operating Costs

Cost per Hour

	<u>Machine</u>	<u>Labor</u>	<u>Tractor</u>	<u>Total</u>
Swather	\$2.00	\$1.50	-	\$3.50
Baler	4.65	1.50	\$2.30	8.45
	<u>\$6.65</u>	<u>\$3.00</u>	<u>\$2.30</u>	<u>\$11.95</u>

Cost per Acre

Swathe	at .32 hours per acre	\$1.12
Bale	at .476 hours per acre	4.02
		<u>\$5.14</u>

Cost per Ton

Swathe	1.5 ton per acre	\$.75
Bale	1.5 ton per acre	2.68
		<u>\$3.43</u>

Total Cost Per Ton

<u>Tons Harvested</u>	<u>Operating Costs</u>	<u>Wire and Hauling</u>	<u>Overhead</u>	<u>Total</u>
100	\$3.43	\$3.50	\$15.48	\$22.41
200	3.43	3.50	7.74	14.67
300	3.43	3.50	5.16	12.09
400	3.43	3.50	3.87	10.80
500	3.43	3.50	3.10	10.03
600	3.43	3.50	2.58	9.52
700	3.43	3.50	2.21	9.14

COSTS USING SWATHER AND RAKE

Investment

Annual Costs

		<u>Depreciation</u>	<u>Interest</u>	<u>Miscellaneous</u>	<u>Total</u>
Swather	\$3700	\$462.50	\$111.00	\$74.00	\$647.50
Rake	750	75.00	22.50	15.00	112.50
Baler	3000	300.00	90.00	60.00	450.00
Tractor (2)	6000	600.00	180.00	120.00	900.00
	<u>\$13,450</u>	<u>\$1,437.50</u>	<u>\$403.50</u>	<u>\$269.00</u>	<u>\$2,110.00</u>

Operating Costs

Cost per Hour

	<u>Machine</u>	<u>Labor</u>	<u>Tractor</u>	<u>Total</u>
Swather	\$2.00	\$1.50	-	\$3.50
Rake	.20	1.50	\$2.30	4.00
Baler	4.65	1.50	2.30	8.45
	<u>\$6.85</u>	<u>\$4.50</u>	<u>\$4.60</u>	<u>\$15.95</u>

Cost per Acre

Swathe:	at .32 hours per acre	\$1.12
Rake	at .28 hours per acre	1.12
Bale	at .26 hours per acre	2.11
		<u>\$4.35</u>

Cost per Ton

Swathe	at 1.5 tons per acre	\$.75
Rake	at 1.5 tons per acre	.75
Bale	at 1.5 tons per acre	1.41
		<u>\$2.91</u>

Total Cost per Ton

<u>Tons Harvested</u>	<u>Operating Costs</u>	<u>Wire and Hauling</u>	<u>Overhead</u>	<u>Total</u>
100	\$2.91	\$3.50	\$21.10	\$27.51
200	2.91	3.50	10.55	16.96
300	2.91	3.50	7.03	13.44
400	2.91	3.50	5.28	11.69
500	2.91	3.50	4.22	10.63
600	2.91	3.50	3.51	9.92
700	2.91	3.50	3.01	9.42

MOW, RAKE AND BALE

Investment

		<u>Annual Costs</u>			
		<u>Depreciation</u>	<u>Interest</u>	<u>Miscellaneous</u>	<u>Total</u>
Mower	\$500	\$ 50.00	\$ 15.00	\$ 10.00	\$ 75.00
Rake	750	75.00	22.50	15.00	112.50
Baler	3,000	300.00	90.00	60.00	450.00
Tractors (2)	6,000	600.00	180.00	120.00	900.00
	<u>\$10,250</u>	<u>\$1,025.00</u>	<u>\$297.50</u>	<u>\$205.00</u>	<u>\$1,537.50</u>

Operating Costs

	<u>Costs per Hour</u>			
	<u>Machine</u>	<u>Labor</u>	<u>Tractor</u>	<u>Total</u>
Mower	\$.25	\$1.50	\$2.30	\$ 4.05
Rake	.20	1.50	2.30	4.00
Baler	4.65	1.50	2.30	8.45
	<u>\$5.10</u>	<u>\$4.50</u>	<u>\$6.90</u>	<u>\$16.50</u>

Cost Per Acre

Mow	at .45 hours per acre	\$1.82
Rake	at .38 hours per acre	1.52
Bale	at .34 hours per acre	<u>2.87</u>
		<u>\$6.21</u>

Cost Per Ton

Mow	at 1.5 tons per acre	\$1.21
Rake	at 1.5 tons per acre	1.01
Bale	at 1.5 tons per acre	<u>1.91</u>
		<u>\$4.13</u>

Total Cost Per Ton

<u>Tons Harvested</u>	<u>Operating Costs</u>	<u>Wire and Hauling</u>	<u>Overhead</u>	<u>Total</u>
100	\$4.13	\$3.50	\$15.38	\$23.01
200	4.13	3.50	7.69	15.32
300	4.13	3.50	5.13	12.76
400	4.13	3.50	3.85	11.48
500	4.13	3.50	3.08	10.71
600	4.13	3.50	2.58	10.21
700	4.13	3.50	2.20	9.83

The figures from this study are from records kept by six producers in Plumas and Sierra Counties. These were time sheets kept on 1728 acres of hay land, 725 acres of dryland alfalfa and 1003 acres of unimproved meadowland.

These haylands produced an average of 1.46 tons per acre. The average size of the fields were 101.6 acres. Time spent per acre for each harvest operation is as follows:

Suathe	.32 hours
Mow	.45 hours
Rake	.32 hours
Baling	.34 hours

The efforts of the six producers are appreciated. Without the results of their records this study would not have been possible.



MY COSTS

<u>Investment</u>	<u>Annual Costs</u>				
	<u>Orig. Cost</u>	<u>Depreciation</u>	<u>Interest</u>	<u>Miscellaneous</u>	<u>Total</u>
Swather	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
Mower	_____	_____	_____	_____	_____
Rake	_____	_____	_____	_____	_____
Baler	_____	_____	_____	_____	_____
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

<u>Operating Costs</u>	<u>Cost per Hour</u>			
	<u>Machine</u>	<u>Labor</u>	<u>Tractor</u>	<u>Total</u>
Swather	\$ _____	\$ _____	\$ _____	\$ _____
Mower	_____	_____	_____	_____
Rake	_____	_____	_____	_____
Bale	_____	_____	_____	_____
	\$ _____	\$ _____	\$ _____	\$ _____

<u>Cost per Acre</u>	
Swathe	at _____ hours per acre \$ _____
Mow	at _____ hours per acre _____
Rake	at _____ hours per acre _____
Bale	at _____ hours per acre _____
	\$ _____

<u>Cost per Ton</u>	
Swathe	at _____ tons per acre \$ _____
Mow	at _____ tons per acre _____
Rake	at _____ tons per acre _____
Bale	at _____ tons per acre _____
	\$ _____

<u>Total Cost Per Ton</u>	<u>Operating Costs</u>	<u>Wire & Hauling</u>	<u>Overhead</u>	<u>Total</u>
Tons _____	_____	_____	_____	_____
Harvested	_____	_____	_____	_____
100	_____	_____	_____	_____
200	_____	_____	_____	_____
300	_____	_____	_____	_____
400	_____	_____	_____	_____
500	_____	_____	_____	_____
600	_____	_____	_____	_____
700	_____	_____	_____	_____