

# 2006 Harvest Year Report for USCHI's Custom Harvester Analysis and Management Program (CHAMP)



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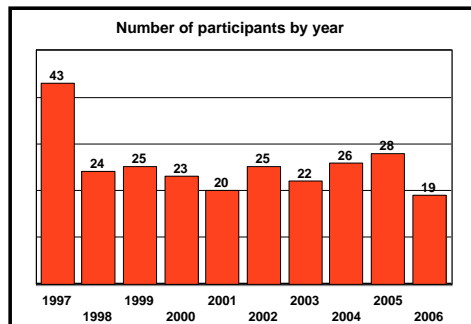
U.S. Custom Harvesters Inc.



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## CHAMP: a survey based program Over the years . . .

- Participation



- Repeat members

- 19 of 19 2006 members participated in 2005
- 8 members have participated all 10 years

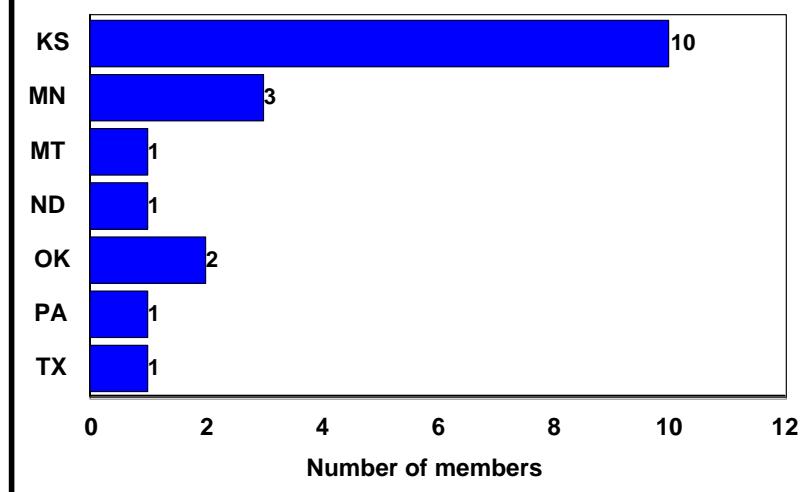
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## General Information

- Location
- Age of manager
- Business structure
- Years in business
- Age and number of combines
- Relative importance of business
- People involved in business
- Number of customers
- Was it a good year?
  - 21% thought it a good year (32% thought bad)

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State where business is located



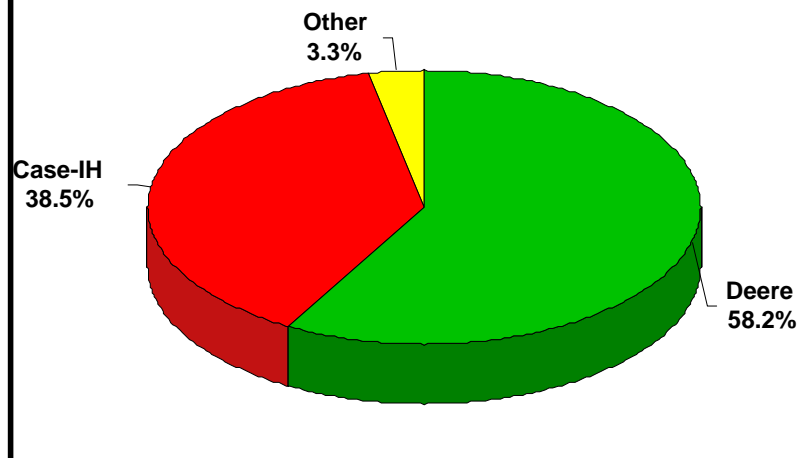
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## More Miscellaneous Information

- **Employee breakdown (season peak)**
  - Family employees average was 33.7%
  - Foreign employees: avg across members 21.9%, 27.6% of total employees
  - Average employees/combine was 2.66 (min=1.67, max=4.00)
- **14 of 19 finance their combines through dealers/manufacturers**
- **9 of 19 get combine insurance through dealer/manufacture**
- **Average interest rate was 7.25%**
  - 2005 6.75%; 2004 5.94%; 2003 6.31%; 2002 6.55%; 2001 7.66%; 2000 9.32%
  - Minimum in 2006 = 4.50%
  - Maximum in 2006 = 9.90%

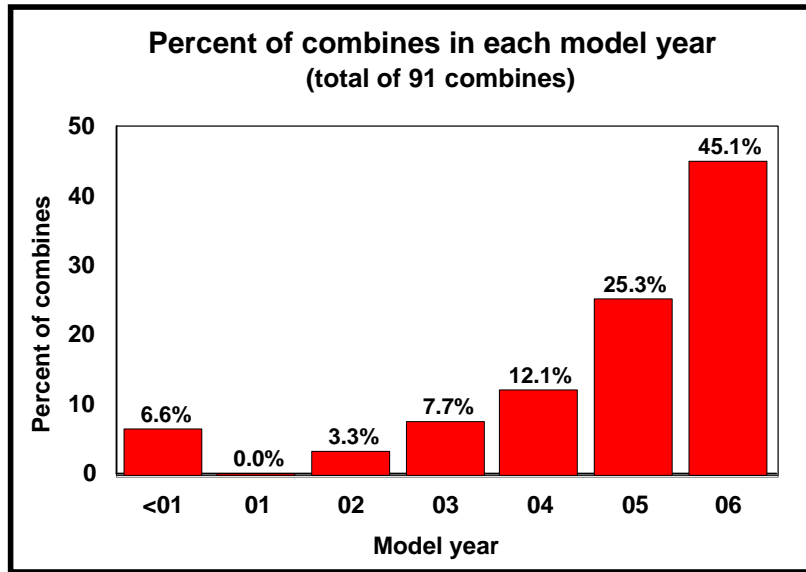
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**Brand of combines used in 2006 in survey**  
(total = 91)

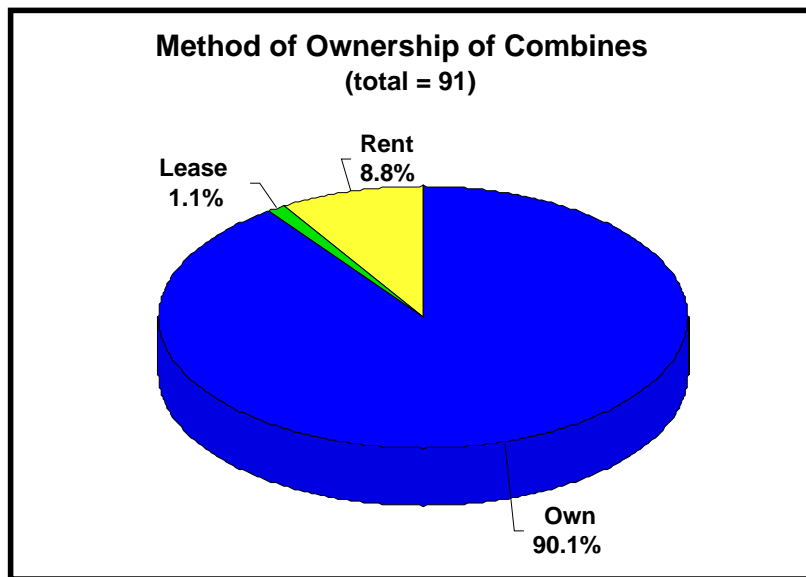


**Members: 9 Deere, 9 Case-IH, 1 Multiple brands**

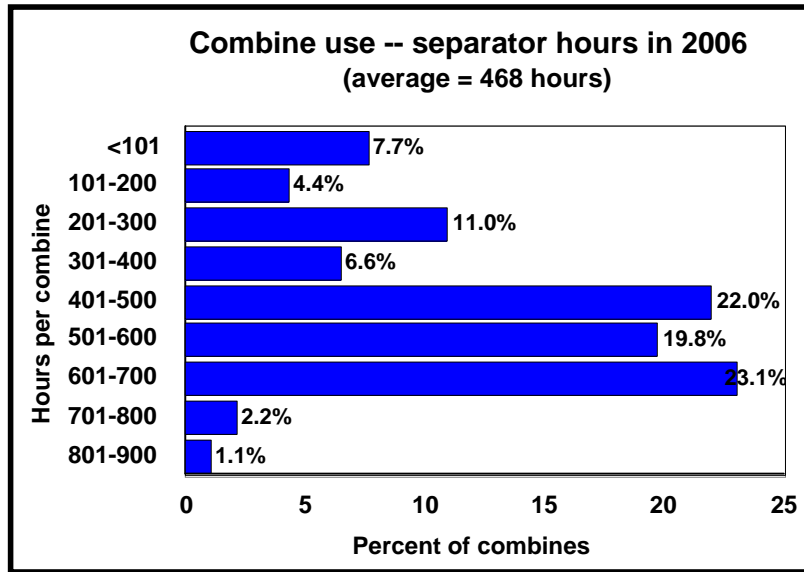
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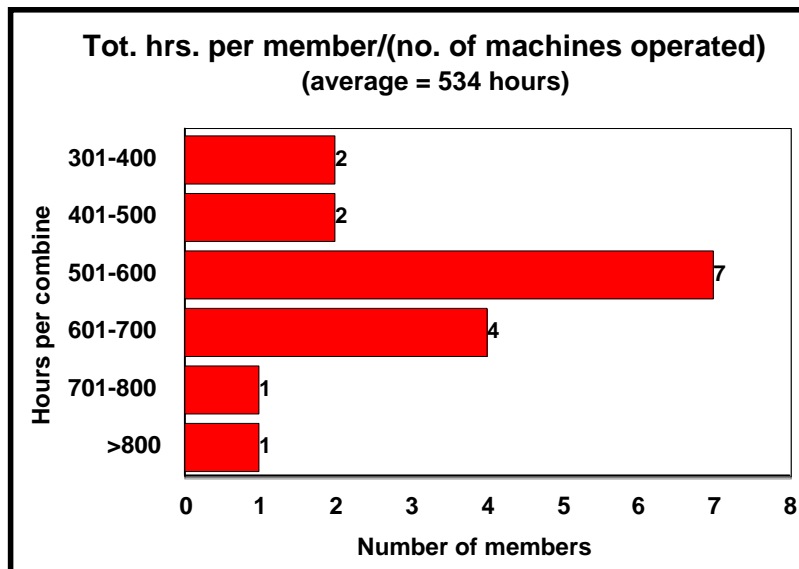
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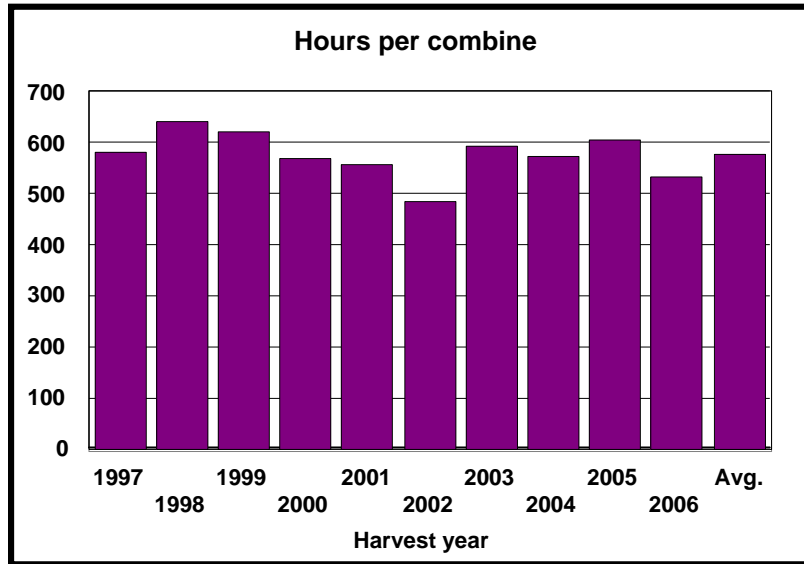


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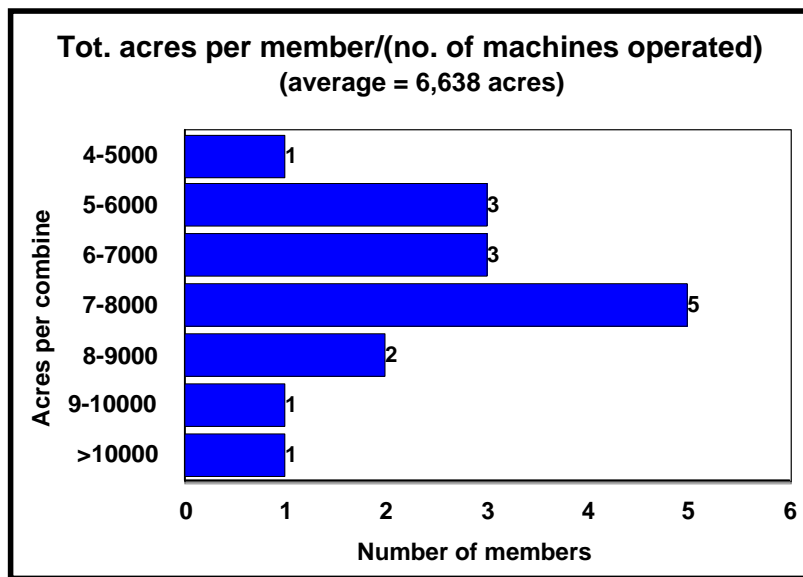


Average engine hours = 623 hours (sep/eng = 75.8%)

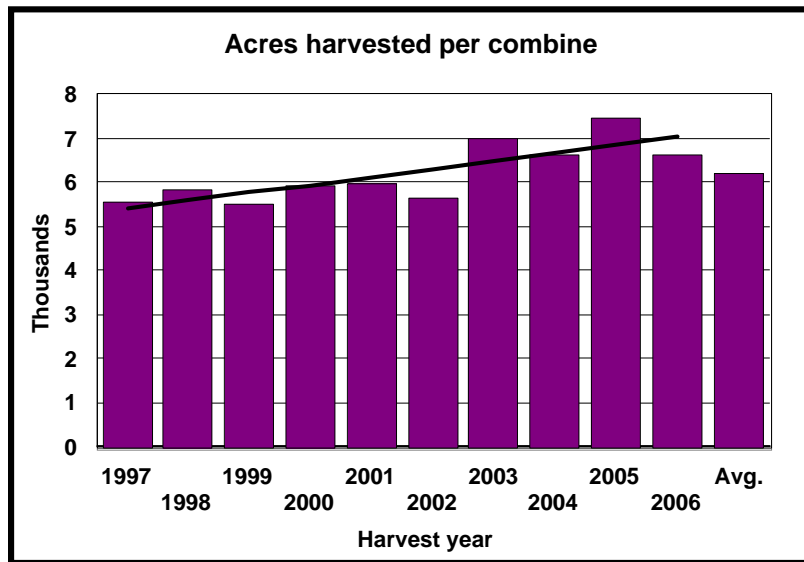




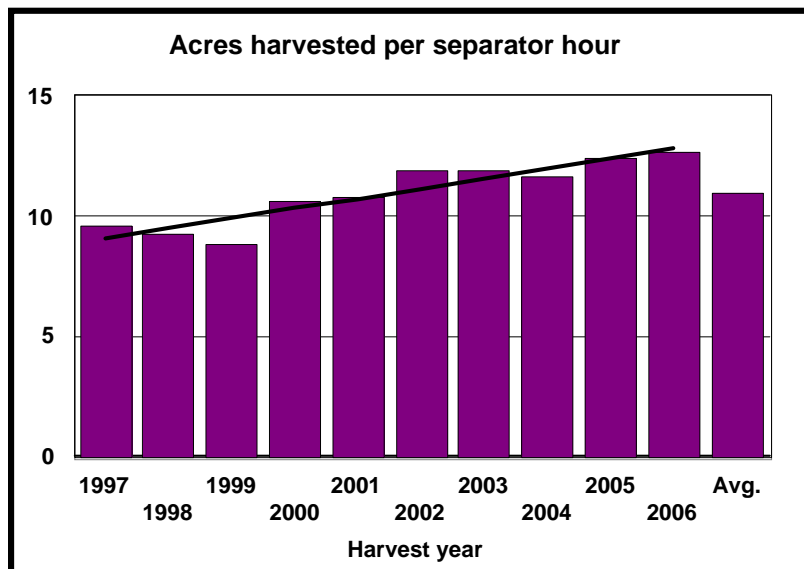
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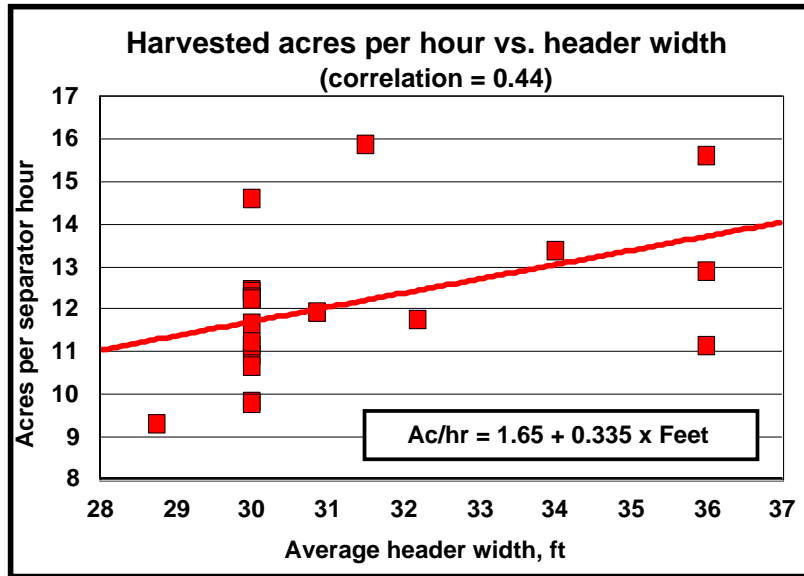


Increase of 179 acres per year



Increase of 0.418 acres/hour per year

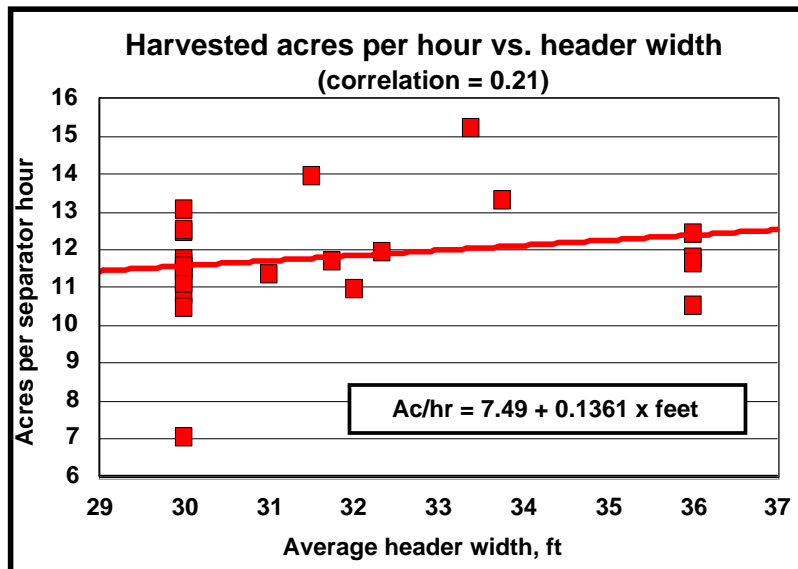
**2003 harvest year**



**20% greater header width resulted in 17% increase in ac/hr**

37

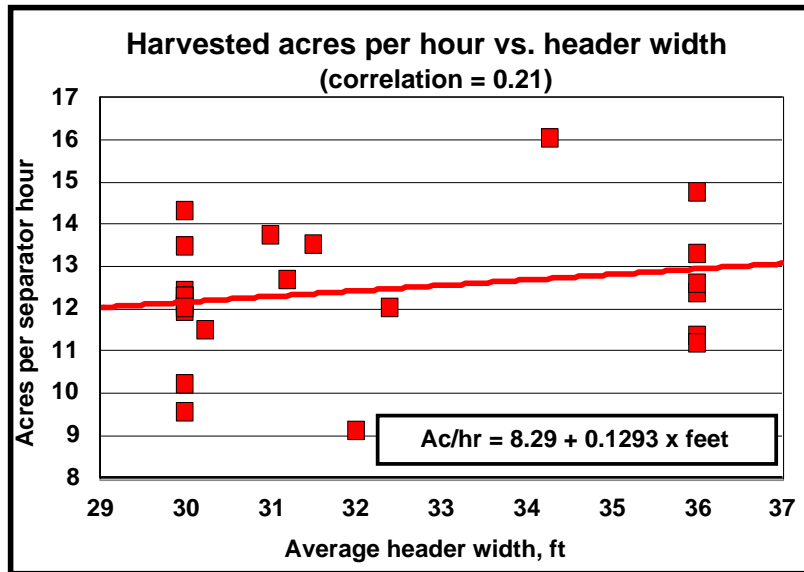
**2004 harvest year**



**20% greater header width resulted in 7% increase in ac/hr**

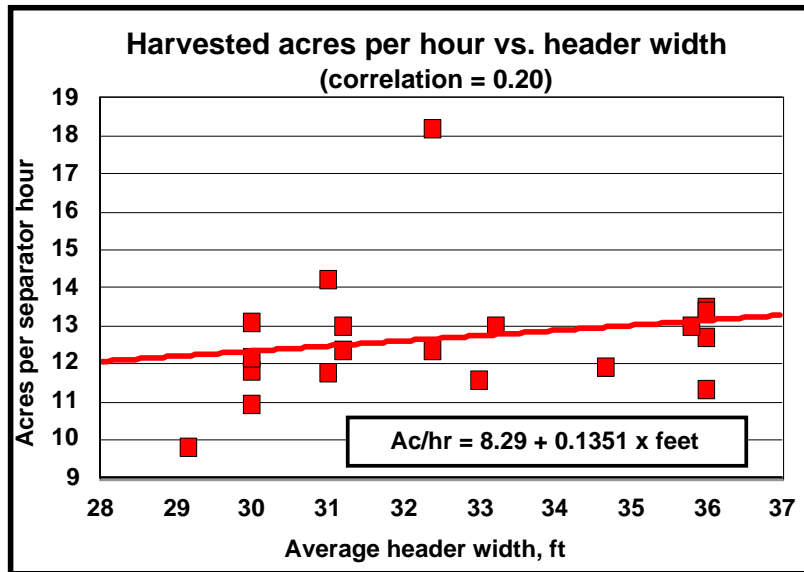
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### 2005 harvest year



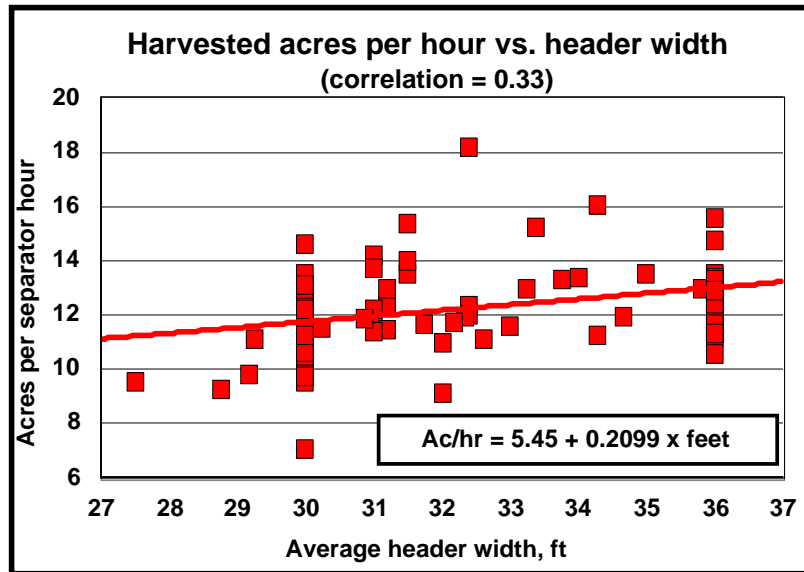
20% greater header width resulted in 6.4% increase in ac/hr  
(analysis based on small grain only, 10.6%)

### 2006 harvest year



20% greater header width resulted in 6.6% increase in ac/hr  
(analysis based on small grain only, 7.1%)

### 2003-2006 harvest years



20% greater header width resulted in 10.7% increase in ac/hr

41

### Grain Truck Information (120 total)

- **Average year** **1992.8**  
(2005 1992.2; 2004 1992.3; 2003 1991.8; 2002 1991.2; 2001 1989.2; 2000 1989.7)
- **% Tandems** **33.3%**
- **% Semis** **64.2%**
- **% owned** **99%**
- **Avg. mi. in 2006 (87 total)** **11,864**  
(2005 15,949; 2004 12433; 2003 12,982; 2002 13,549; 2001 12,692; 2000 19,589)
- **Avg. miles on truck at end of year**  
– **(64 total): 390,281**  
(2005 486,221; 2004 473,299; 2003 454,461; 2002 552,128; 2001 558,707; 2000 513,162)

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## Value of Assets per Combine Operated

• Combine	\$127,465
• Platforms	\$44,985
• Other equipment (trucks, etc)	<u>\$114,872</u>
<b>Sub Total</b>	<b>\$287,322</b>
• Other assets (balance sheet)	<u>\$10,390</u>
<b>TOTAL</b>	<b>\$297,713</b>

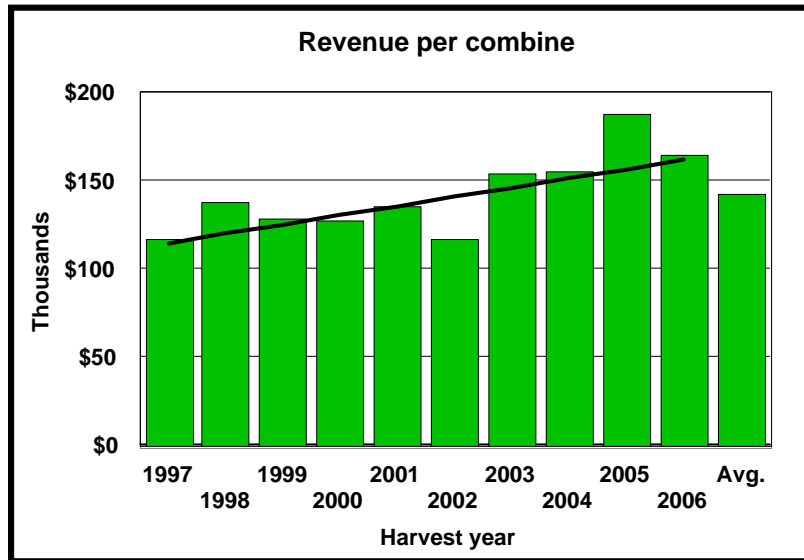
45

## Equipment depreciation

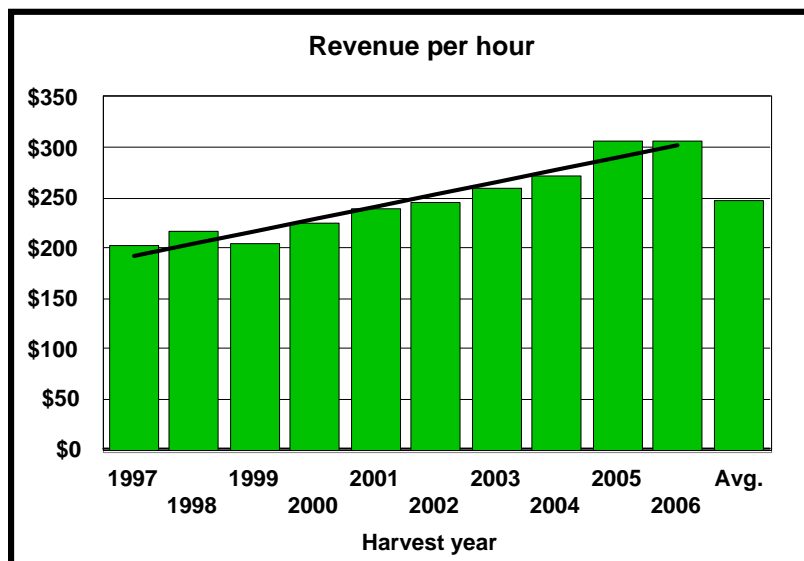
### Market depreciation (% drop in value)

	2006	2005	2004	2003	2002	2001	2000	1999
• Combines	12.3	10.3	13.3	14.4	14.0	14.7	15.1	16.1
• Headers/equip	7.4	6.9	5.0	7.5	7.9	5.1	7.4	9.1
• Trucks	-2.5	0.4	4.0	7.2	11.2	11.0	12.1	5.9

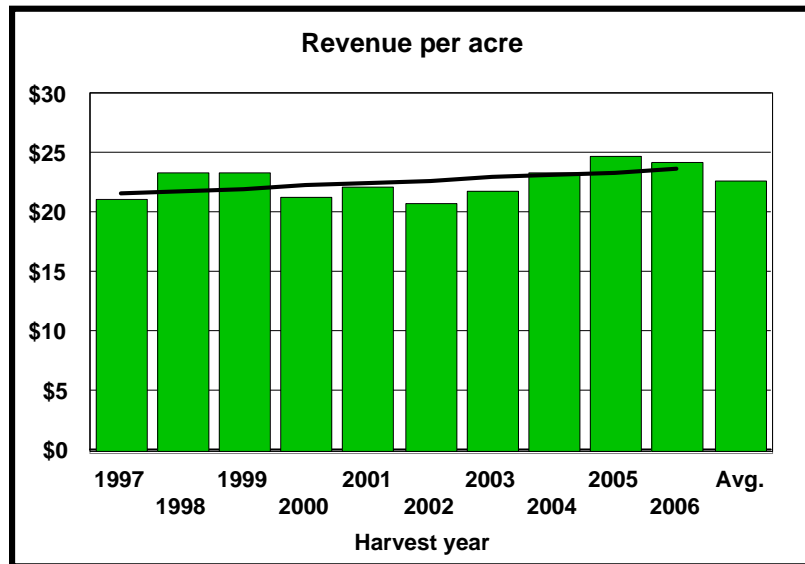
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Increase of \$5,230 per year



Increase of \$12.26 per year



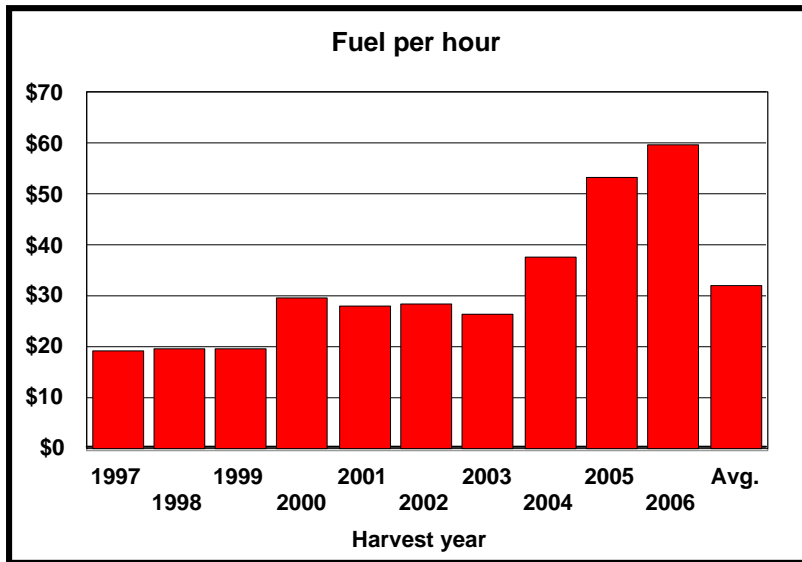
Increase of \$0.23 per year

79

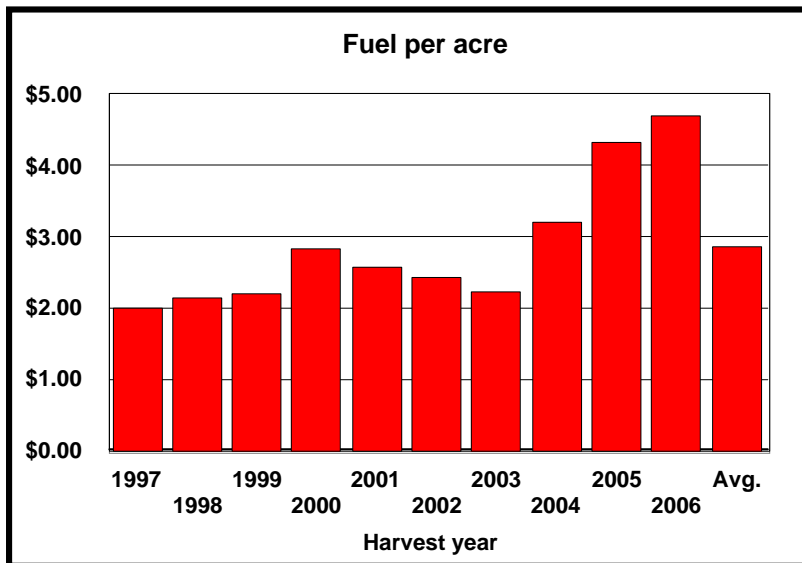
## Operating Expense Information

- Labor (paid and unpaid)
- Travel
- Fuel and Lubrication
- Repair and Maintenance
- Insurance
- Telephone and Utilities
- Other Expenses (prop tax, tags/permits, hire, rent/lease)
- Market Depreciation
- Interest on Assets (assigned)

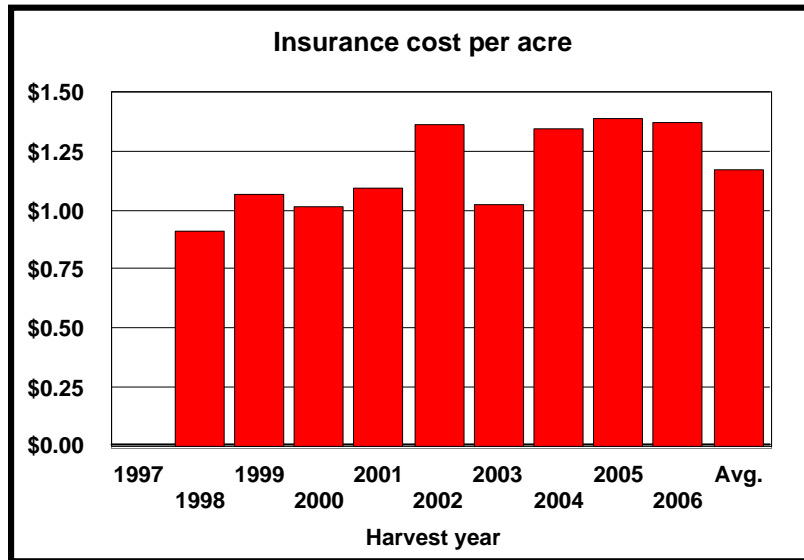
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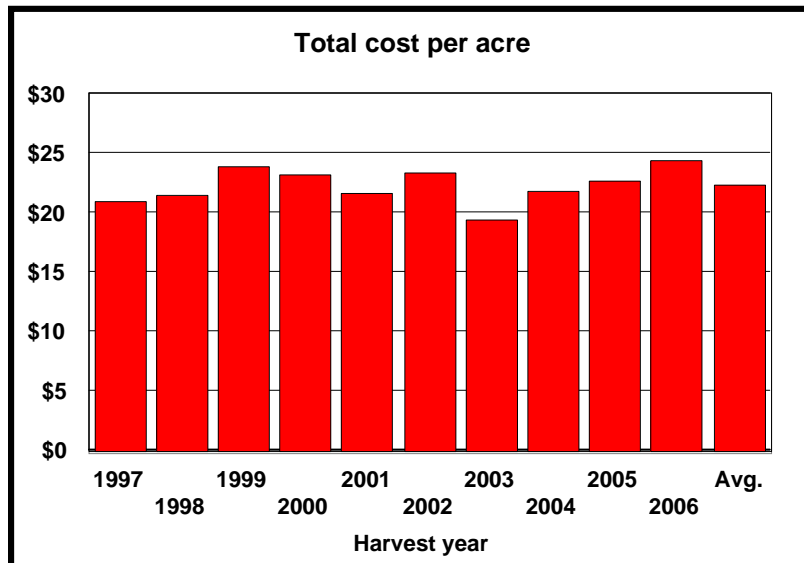
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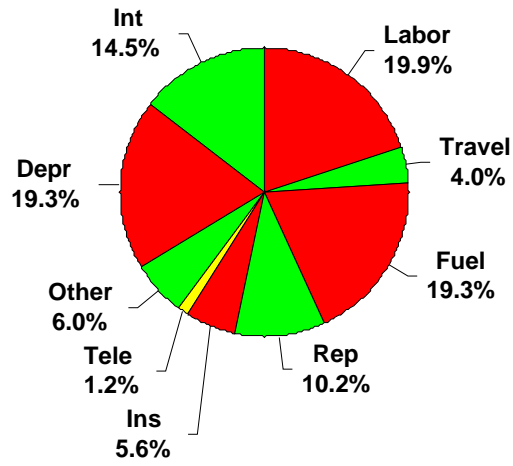


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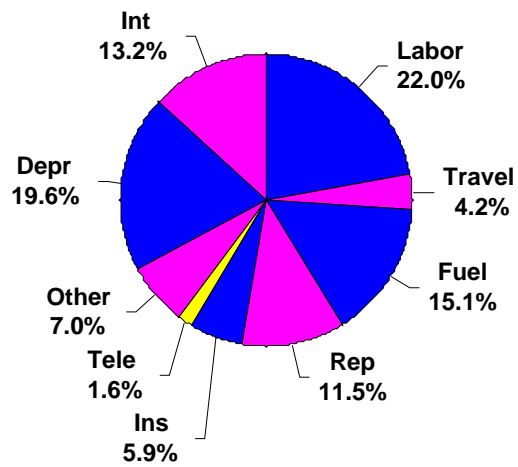
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**Distribution of expenses per acre**

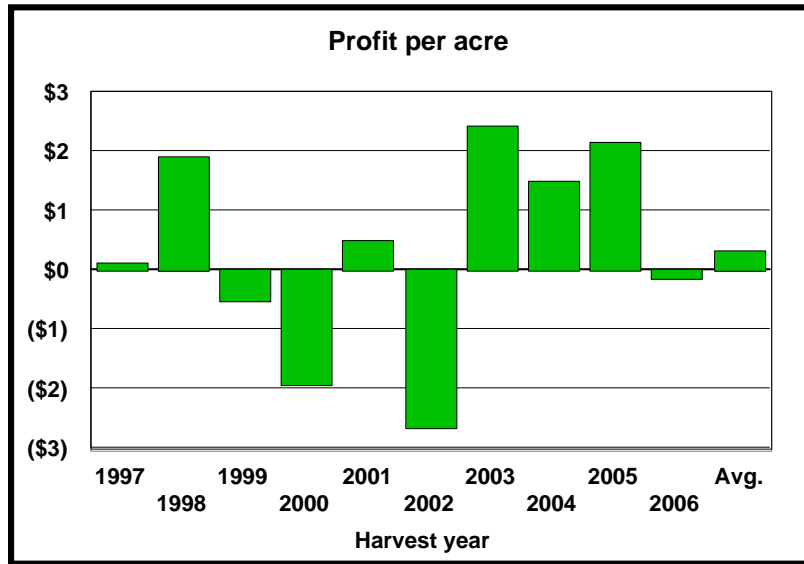


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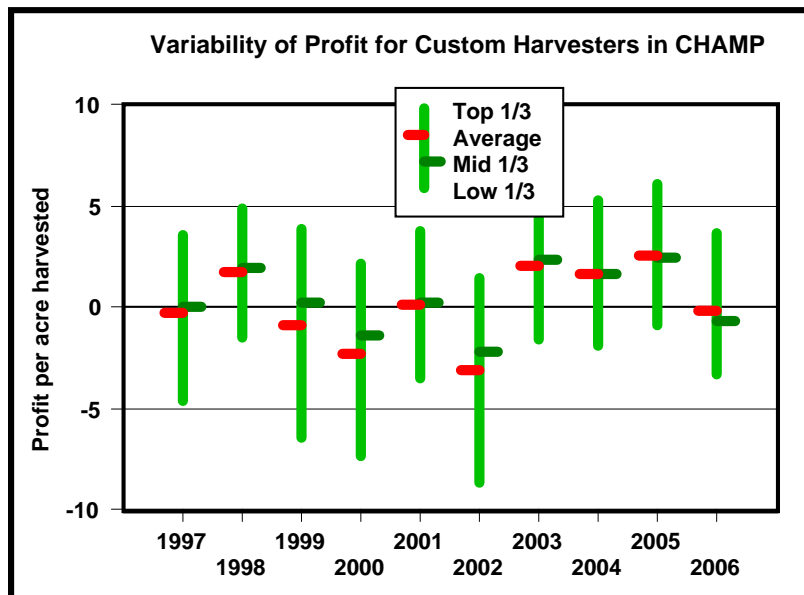
**Distribution of expenses per acre, 2003-05**



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115

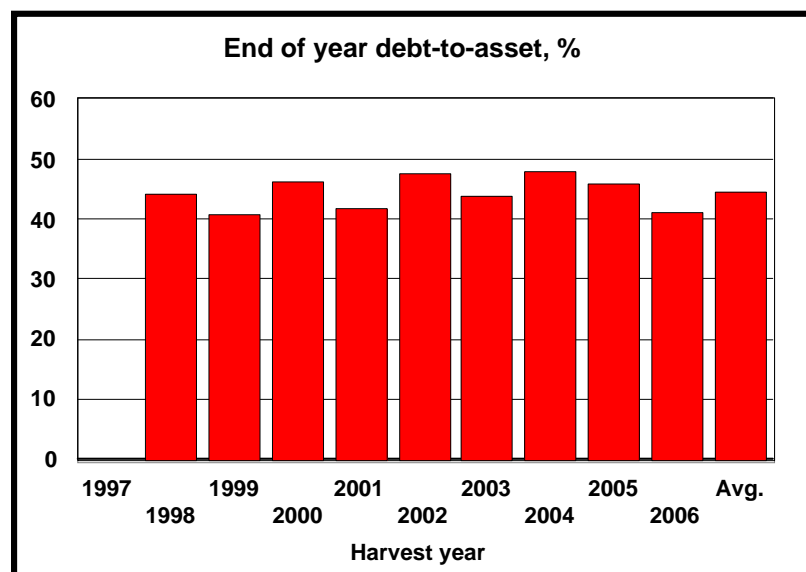


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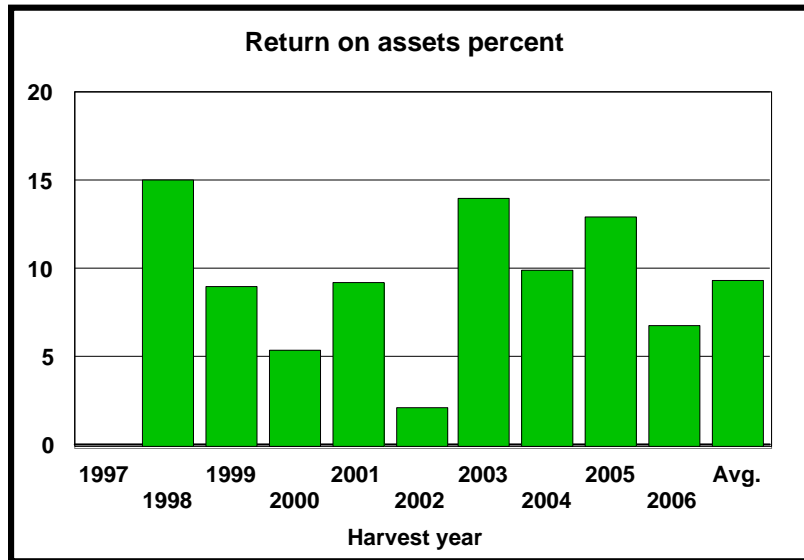
## Profit and Financial Ratios

- Profit = revenue - expense
- Debt-to-assets (D/A) = 
$$\frac{\text{total liabilities}}{\text{total assets}}$$
- Return on Assets (ROA) = 
$$\frac{\text{profit} + \text{interest}}{\text{average assets}}$$

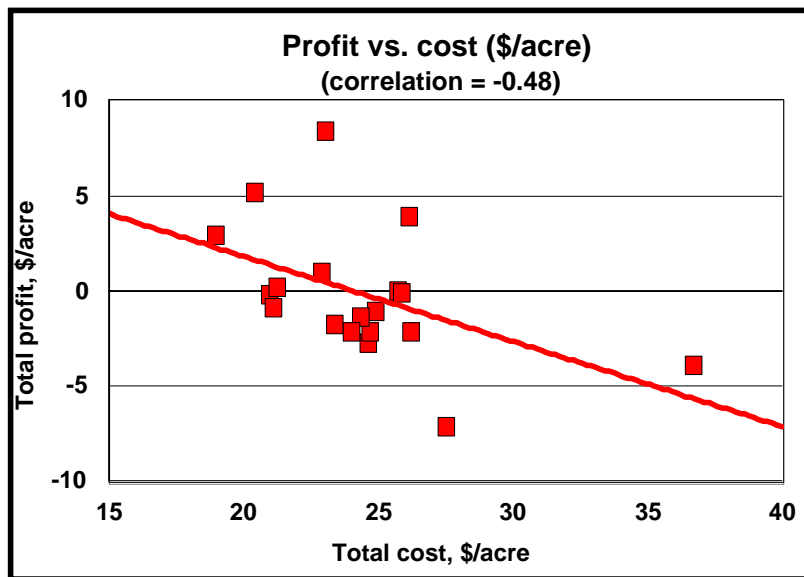
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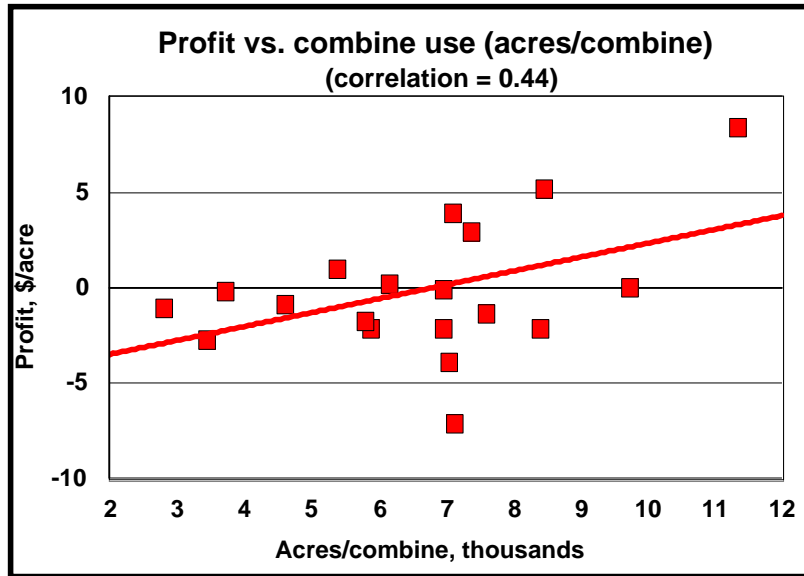
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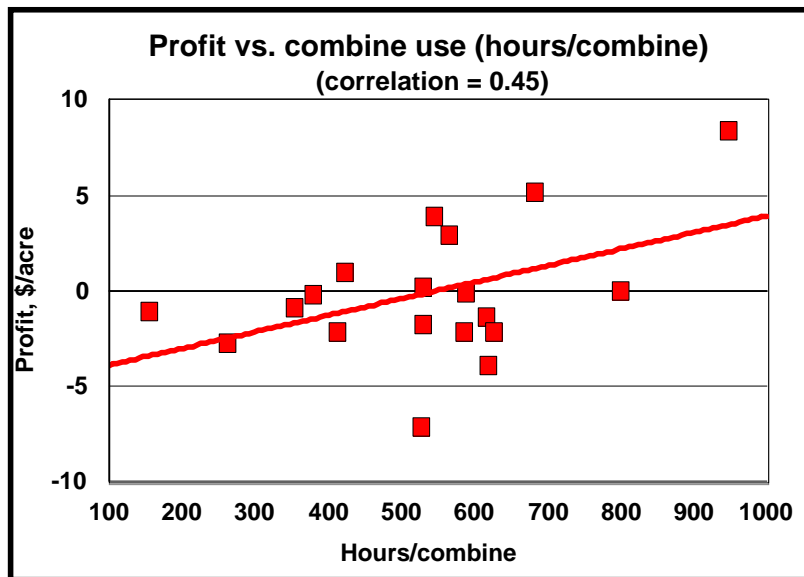
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## Economics of “additional acres”

- How low can I go and still be better off than sitting idle?
- A fixed versus variable costs issue

Custom Harvester Analysis and Management Program (CHAMP)  
 2006 Harvest Year  
 Individual Firm Report

Happy Harvesters Inc.  
 Box 999  
 Wheat Country, KS 66999

	Initial value/firm	Change	Modified value/firm	Value per combine		Value per acre		
Number of Machines Operated	3.0	0.0	3.0					
Value of Combines	\$405,000	\$0	\$405,000	\$135,000	\$135,000	\$20.24		
Value of Platforms	\$103,000	\$0	\$103,000	\$34,333	\$34,333	\$6.15		
Value of Other Equipment	\$325,000	\$0	\$325,000	\$108,333	\$108,333	\$16.25		
Value of Other Assets	\$83,000	\$0	\$83,000	\$27,667	\$27,667	\$4.15		
<b>Total Assets</b>	<b>\$916,000</b>	<b>\$0</b>	<b>\$916,000</b>	<b>\$305,333</b>	<b>\$305,333</b>	<b>\$46.79</b>		
Total Acres Covered	20,005	(3,000)	17,005	6,668	6,668	1.00	15.0%	
Combine Rent Acres	N/A	0	0	N/A	N/A	N/A		
Small Grains Percent	76.3	0.0						
Acres per separator hour	12.50	0.00	12.50	0		0.08		
<b>Total Separator Hours</b>	<b>1,601</b>	<b>(246)</b>	<b>1,351</b>	<b>639.7</b>	<b>463.6</b>			
<b>INCOME AND EXPENSE</b>								
Harvest Revenue	\$497,200	(\$61,811)	\$435,389	\$185,733	\$145,130	\$24.85	\$25.60	
Combine Rent Revenue	N/A	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
Other Revenue	\$4,500	\$0	\$4,500	\$1,500	\$1,500	\$0.22	\$0.26	
<b>Total Revenue</b>	<b>\$501,700</b>	<b>(\$61,811)</b>	<b>\$439,889</b>	<b>\$187,233</b>	<b>\$146,630</b>	<b>\$26.08</b>	<b>\$25.87</b>	
<b>Revenue reduction/acre</b>								
Labor (paid and unpaid)	\$108,000	\$0	\$108,000	\$36,000	\$36,000	\$5.40	\$6.35	
Travel	\$16,872	(\$1,410)	\$14,262	\$5,224	\$4,754	\$0.78	\$0.84	
Fuel and Lubrication	\$95,231	(\$14,731)	\$80,500	\$32,744	\$27,833	\$4.91	\$4.91	
Repair and Maintenance	\$55,463	(\$6,317)	\$47,146	\$18,488	\$15,715	\$2.77	\$2.77	
Insurance	\$26,200	(\$795)	\$25,414	\$8,733	\$5,471	\$1.31	\$1.49	
Telephone and Utilities	\$6,603	(\$495)	\$6,108	\$2,201	\$2,036	\$0.33	\$0.36	
Other Expenses	\$28,642	(\$4,295)	\$24,347	\$9,547	\$8,116	\$1.43	\$1.43	
Market Depreciation	\$95,700	(\$6,426)	\$79,274	\$28,567	\$26,425	\$4.28	\$4.66	
Interest on Assets (assigned)	\$66,370	(\$4,977)	\$61,394	\$22,123	\$20,485	\$3.32	\$3.61	
<b>Total Expense</b>	<b>\$490,881</b>	<b>(\$41,437)</b>	<b>\$449,444</b>	<b>\$163,627</b>	<b>\$149,815</b>	<b>\$24.54</b>	<b>\$26.43</b>	
<b>Total Operating Profit</b>	<b>\$10,819</b>	<b>(\$20,374)</b>	<b>(\$9,555)</b>	<b>\$3,606</b>	<b>(\$3,185)</b>	<b>\$0.54</b>	<b>(\$0.56)</b>	
<b>Degree of "fixed cost"</b>								
						100.0%	117.8%	117.84%
						40.0%	107.1%	117.84%
						0.0%	100.0%	117.84%
						0.0%	100.0%	117.84%
						80.0%	114.1%	117.84%
						60.0%	108.8%	117.84%
						0.0%	100.0%	117.84%
						50.0%	108.8%	117.84%
						60.0%	108.8%	117.84%

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Value of Platforms	\$103,000	\$0	\$103,000	\$34,333	\$34,333	\$6.15	
Value of Other Equipment	\$325,000	\$0	\$325,000	\$108,333	\$108,333	\$16.25	
Value of Other Assets	\$83,000	\$0	\$83,000	\$27,667	\$27,667	\$4.15	
Total Assets	\$916,000	\$0	\$916,000	\$305,333	\$305,333	\$45.79	
Total Acres Covered	20,005	2,600	22,605	6,868	7,502	1.00	-12.5%
Combine Rent Acres	N/A	0	0	N/A	N/A	N/A	
Small Grains Percent	76.3	0.0					
Acres per separator hour	12.50	0.00	12.50	0	0	0.08	
Total Separator Hours	1,601	200	1,801	633.7	600.4		
<b>INCOME AND EXPENSE</b>							
Harvest Revenue	\$497,200	\$48,072	\$545,272	\$165,733	\$161,757	\$24.85	\$24.23
Combine Rent Revenue	N/A	\$0	\$0	\$0	\$0	\$0.00	\$0.00
Other Revenue	\$4,500	\$0	\$4,500	\$1,500	\$1,500	\$0.22	\$0.20
Total Revenue	\$501,700	\$48,072	\$549,772	\$167,233	\$163,257	\$25.08	\$24.43
Labor (paid and unpaid)	\$108,000	\$2,689	\$110,689	\$36,000	\$36,900	\$5.40	\$4.92
Travel	\$15,672	\$783	\$16,455	\$5,224	\$5,485	\$0.78	\$0.73
Fuel and Lubrication	\$98,231	\$12,276	\$110,507	\$32,744	\$36,636	\$4.91	\$4.91
Repair and Maintenance	\$55,463	\$6,931	\$62,394	\$18,488	\$20,798	\$2.77	\$2.77
Insurance	\$25,200	\$655	\$25,855	\$8,733	\$9,952	\$1.31	\$1.19
Telephone and Utilities	\$6,603	\$413	\$7,016	\$2,201	\$2,339	\$0.33	\$0.31
Other Expenses	\$28,642	\$3,579	\$32,221	\$9,547	\$10,740	\$1.43	\$1.43
Market Depreciation	\$95,700	\$5,365	\$101,065	\$33,667	\$33,352	\$4.29	\$4.05
Interest on Assets (assigned)	\$66,370	\$4,147	\$70,517	\$22,123	\$23,506	\$3.32	\$3.13
Total Expense	\$490,881	\$36,838	\$527,720	\$163,627	\$175,907	\$24.54	\$23.45
Total Operating Profit	\$10,819	\$11,234	\$22,053	\$3,606	\$7,351	\$0.54	\$0.98

Revenue reduction/acre  
\$5.00  
\$0.00

Degree of "fixed cost"  
80.0% 91.1% 88.89%  
60.0% 93.3% 88.89%  
0.0% 100.0% 88.89%  
0.0% 100.0% 88.89%  
80.0% 91.1% 88.89%  
50.0% 94.4% 88.89%  
0.0% 100.0% 88.89%  
50.0% 94.4% 88.89%  
50.0% 94.4% 88.89%

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## Summary

- On average, 2006 was an average year
- Of 10 years analyzed, 2006 was:
  - a typical year profit-wise
  - highest harvested acres/hour
  - highest revenue per hour and per acre
  - highest fuel cost per acre
- Considerable variability between firms
  - 7 of 19 firms were profitable in 2006
  - (19/23 in 2005; 16/23 in 2004; 17/22 in 2003; 6/21 in 2002; 11/20 in 2001; 9/22 in 2000)

## *Questions???*

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