

# Costs of Producing Wine Grapes in Lake County



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# Costs of Production



- Cultural Costs
- Harvest Costs
- Cash Overhead
- Noncash Overhead

# Costs of Production



- Cultural Costs
  - Pruning and brush removal
  - Floor management
  - Disease and pest control
  - Irrigation
  - Leaf analysis
  - ATV and pickup use
- Harvest Costs
- Cash Overhead
- Noncash Overhead

# Costs of Production



- Cultural Costs
- Harvest Costs
  - Mechanical Harvest – Contract
  - Haul to Processor – out of county
- Cash Overhead
- Noncash Overhead

# Costs of Production



- Cultural Costs
- Harvest Costs
- Cash Overhead
  - Liability Insurance
  - Sanitary Service
  - Property Taxes and Insurance
  - Repairs on Buildings and Irrigation System
- Noncash Overhead

# Costs of Production



- Cultural Costs
- Harvest Costs
- Cash Overhead
- Noncash Overhead (Capital Recovery)
  - Buildings, Shop, and Field Tools
  - Irrigation System
  - Fuel Tanks
  - Equipment
  - Trees

# Equipment costs



- **Operating costs**
  - Fuel and lube
  - Repairs
- **Business overhead**
  - Insurance
  - Taxes
- **Capital recovery**
  - Principle and interest or ownership costs

# White varieties wine grapes assumptions



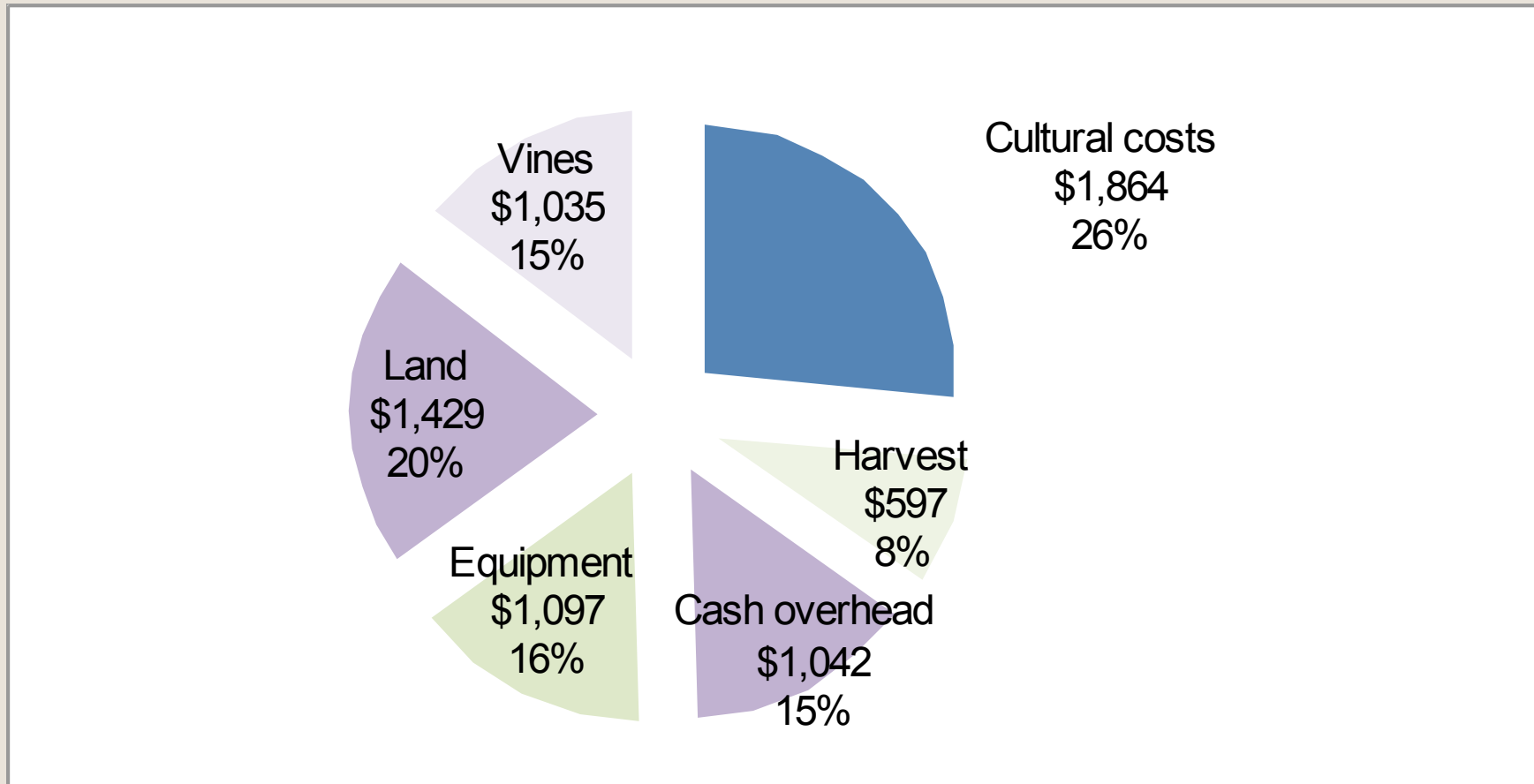
- Vineyard owned and operated by the grower
- Sauvignon blanc, 6' X 8' spacing
- Vertical (VSP) trellis system
- Bilateral, cordon-trained, spur-pruned vineyard
- 6 wires
- 40 acres contiguous land, 35 acres of vines
- Drip irrigation
- 7 tons per acre

# White varieties wine grapes assumptions

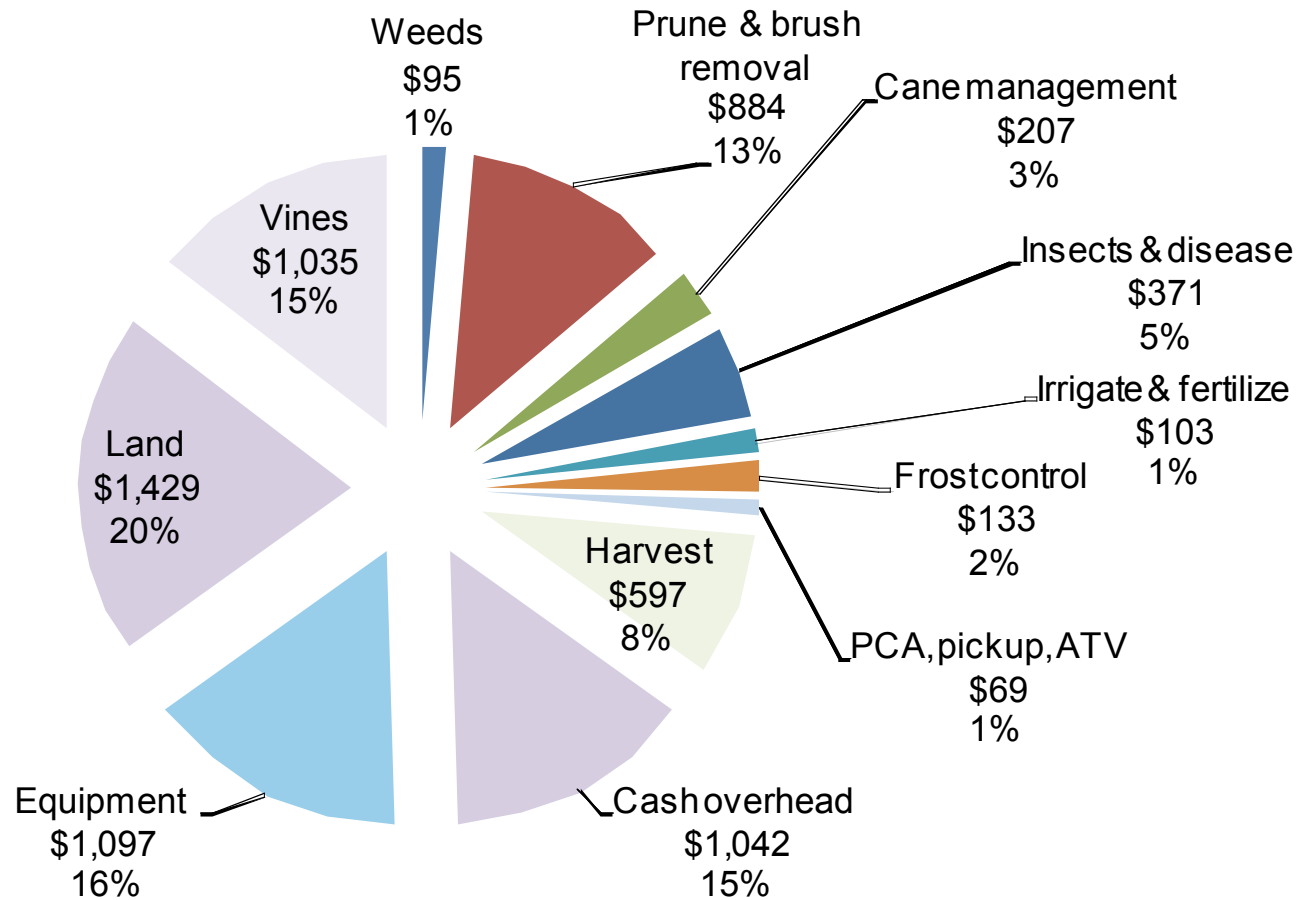


<b>January</b>	<b>Herbicide spray in vine rows</b>
<b>February</b>	<b>Hand prune</b>
<b>March</b>	<b>Mow middles</b> <b>Tie cordons to wires</b>
<b>April</b>	<b>Mite control</b> <b>Mildew control begins</b>
<b>April, May</b>	<b>Frost protection</b>
<b>May</b>	<b>Sucker cordons and trunks – 2 passes</b> <b>Move bottom wire, tuck shoots</b>
<b>May, June, July</b>	<b>Mow middles</b>
<b>June</b>	<b>Mechanical leaf removal</b>
<b>June – Sept.</b>	<b>Fertilize and irrigate</b>
<b>July</b>	<b>Leafhopper control</b>
<b>September</b>	<b>Mechanical harvest</b>

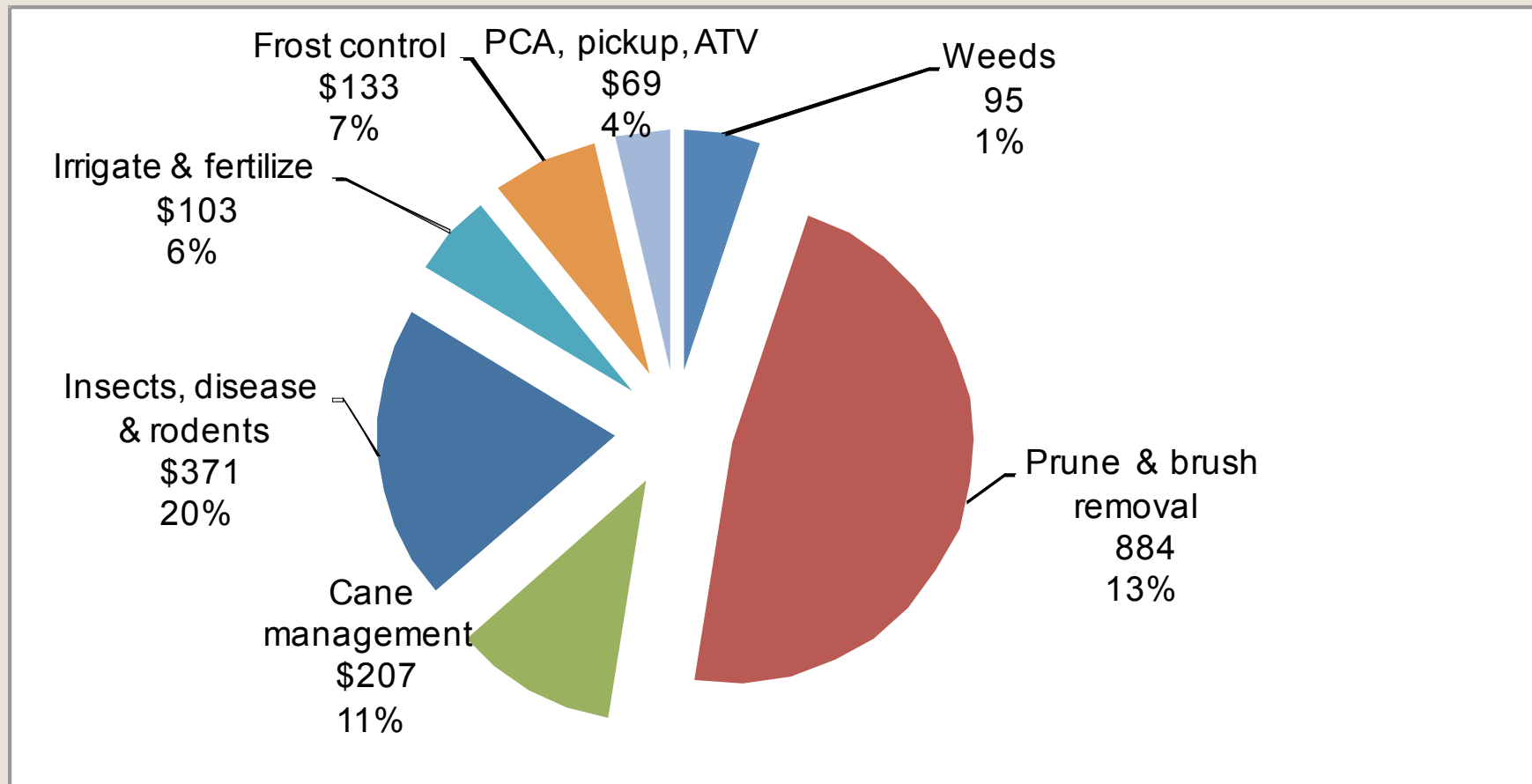
# Total cost of production, \$ 7,064per acre White winegrapes, Lake County



# Total cost of production, \$7,064 per acre White winegrapes, Lake County



# Cultural Costs, \$1,864 per acre White winegrapes, Lake County



# Prune & brush removal detail

## White winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Dormant prune				\$373
Sucker trunks	\$149			\$149
Sucker cordons	\$362			\$362
Total	\$511			\$884

# Weed control detail

## White winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Winter strip spray	\$6	\$53	\$1	\$60
Mow centers	16		12	27
Strip spot spray	5	2	1	8
<b>Total</b>	<b>27</b>	<b>55</b>	<b>14</b>	<b>95</b>

Operation	Month	Tractor	Implement	Material
Winter strip spray	January	ATV	Weed sprayer	Goal, Roundup, Surflan, Chateau
Mow centers	March, June	50 HP	Flail mower	
Strip spot spray	July	ATV	Weed sprayer	Roundup

# Cane management detail

## White winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Tie cordons to wire	\$85			\$85
Move bottom wire	\$122			\$122
Total	\$207			\$207

# Irrigation and fertilizer detail

## White winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Irrigation	\$14	\$27		\$41
Fertilize - drip		\$37		\$37
Fertilize - ground	\$1	\$23	\$1	\$25
<b>TOTAL</b>	<b>\$15</b>	<b>\$87</b>	<b>\$1</b>	<b>\$103</b>
Frost protection	\$47	\$54	\$32	\$133

Operation	Month	Tractor	Implement	Material
Irrigate & fertilize	June – Sept.			UN 32, Potassium
Fertilize	October	35HP	Spreader	Gypsum
Frost protection	April, May			

# Insect, disease, and rodent control detail

## White winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Disease/insects	\$5	\$23	\$4	\$32
Disease control	\$108	\$114	\$46	\$268
Leaf removal	\$16		\$13	\$29
Insect control	\$11	\$11	\$8	\$30
Rodent control	\$4	\$6	\$2	\$11
PCA				\$30
<b>TOTAL</b>				<b>\$401</b>

# Red varieties wine grapes assumptions



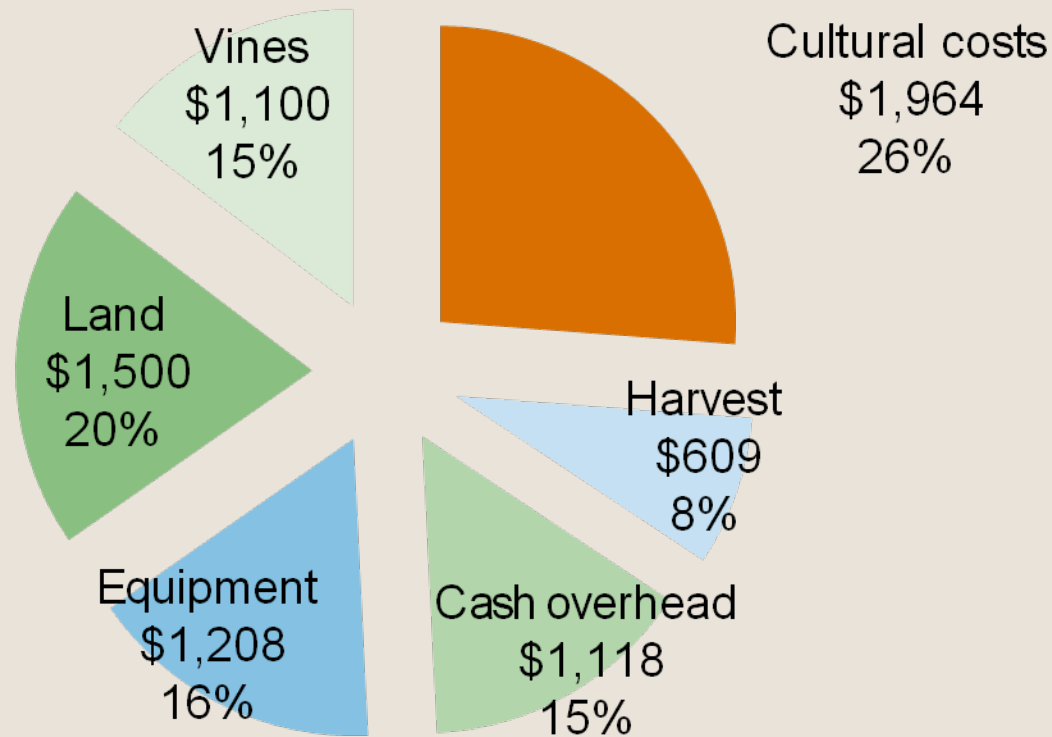
- Vineyard owned and operated by the grower
- Cabernet Sauvignon, 6' X 8' spacing
- Vertical (VSP) trellis system
- Bilateral, cordon-trained, spur-pruned vineyard
- 6 wires
- 30 acres contiguous land, 25 acres of vines
- Drip irrigation
- 5.75 tons per acre

# Red varieties calendar of operations

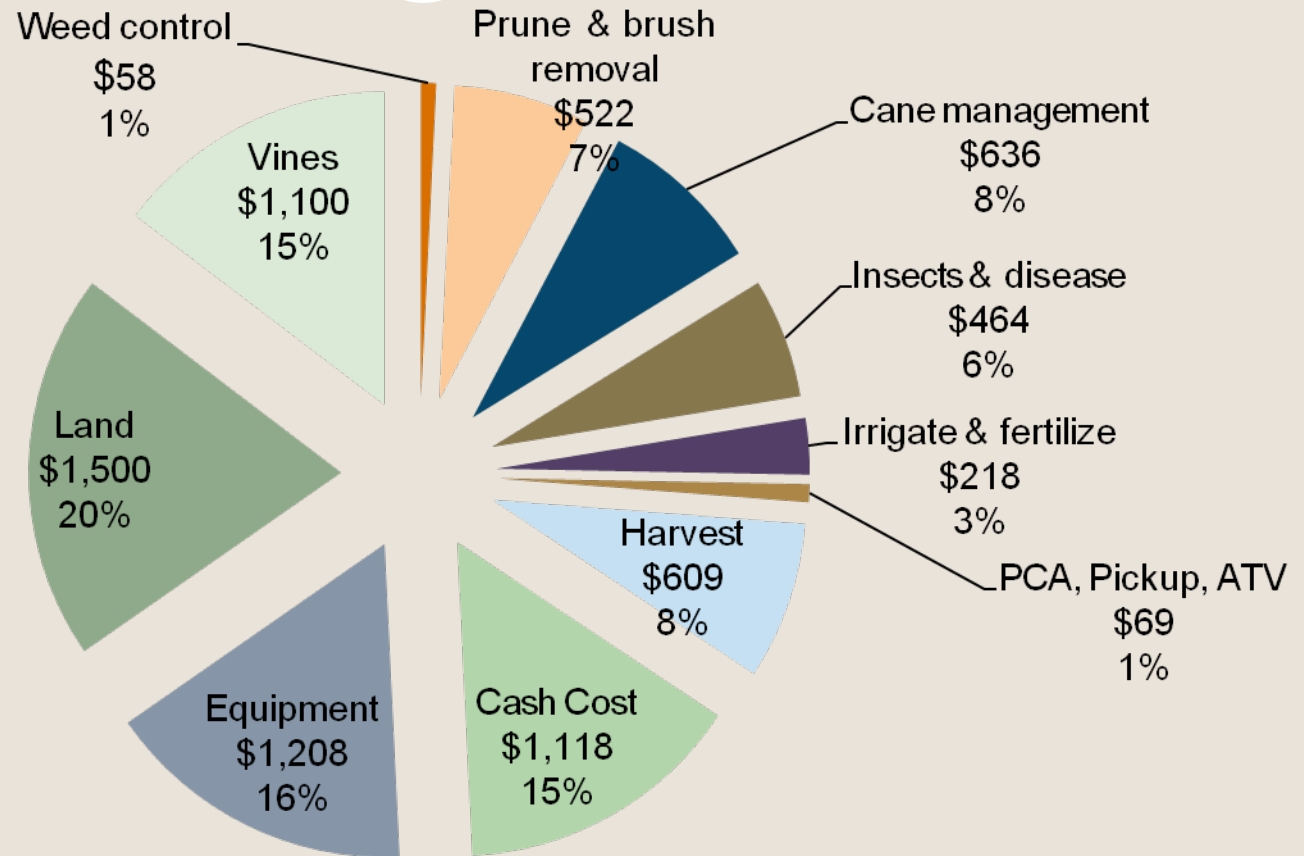


<b>January</b>	<b>Herbicide spray in vine rows</b>
<b>February</b>	<b>Hand pruning</b>
<b>March</b>	<b>Mow middles</b> <b>Tie cordons to wires</b>
<b>April</b>	<b>Mite control</b> <b>Mildew control begins</b> <b>Sucker cordons and trunk – 1 pass</b>
<b>May, June, July</b>	<b>Mow middles</b> <b>Move wires up, tuck shoots 3X</b>
<b>June, July</b>	<b>Mechanical leaf removal</b>
<b>June – Sept.</b>	<b>Fertilize and irrigate</b>
<b>July</b>	<b>Leafhopper control</b>
<b>September</b>	<b>Mechanical harvest</b>

# Total cost of production, \$ 7,500 per acre Red winegrapes, Lake County

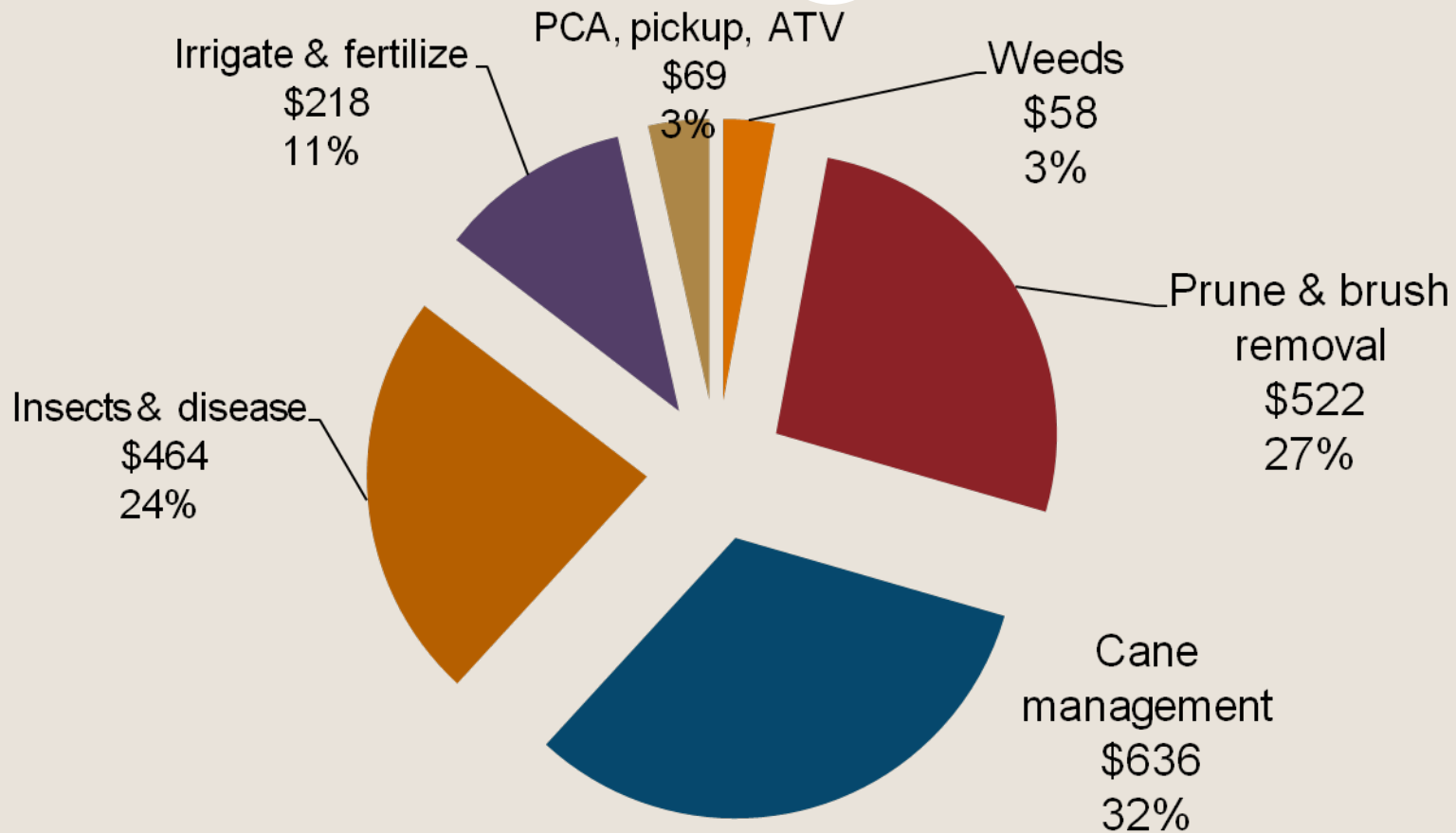


# Total costs of Production, \$7,500 per acre Red winegrapes, Lake County



# Cultural Costs, \$1,964 per acre

## Red winegrapes, Lake County



# Prune & brush removal detail

## Red winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Dormant prune				\$373
Sucker	\$149			\$149
Total	\$149			\$522

# Cane management detail

## Red winegrapes, Lake County



<b>Operation</b>	<b>Labor</b>	<b>Material</b>	<b>Fuel, lube, and repairs</b>	<b>Total</b>
Tie cordons to wire	\$269			\$269
Move bottom wire	\$367			\$367
<b>Total</b>	<b>\$636</b>			<b>\$636</b>

# Weed control detail

## Red winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Winter strip spray	\$6	\$4	\$1	\$12
Mow centers	22		16	38
Strip spot spray	5	2	1	8
<b>Total</b>	<b>33</b>	<b>6</b>	<b>18</b>	<b>58</b>

Operation	Month	Tractor	Implement	Material
Winter strip spray	January	ATV	Weed sprayer	Roundup
Mow centers	March, May, June	50 HP	Flail mower	
Strip spot spray	June	ATV	Weed sprayer	Roundup

# Irrigation and fertilizer detail

## Red winegrapes, Lake County



Operation	Labor	Material	Fuel, lube, and repairs	Total
Irrigation	\$12	\$37		\$49
Fertilize - drip		\$109		\$88
Fertilize - ground	\$1	\$23	\$34*	\$79
<b>TOTAL</b>	<b>\$13</b>	<b>\$169</b>	<b>\$34</b>	<b>\$216</b>

\* Includes spreader rental

Operation	Month	Tractor	Implement	Material
Irrigate & fertilize	June-Aug			CaNO <sub>3</sub> , potassium
Fertilize	October	50HP	Spreader	Gypsum

# Insect, disease, and rodent control detail

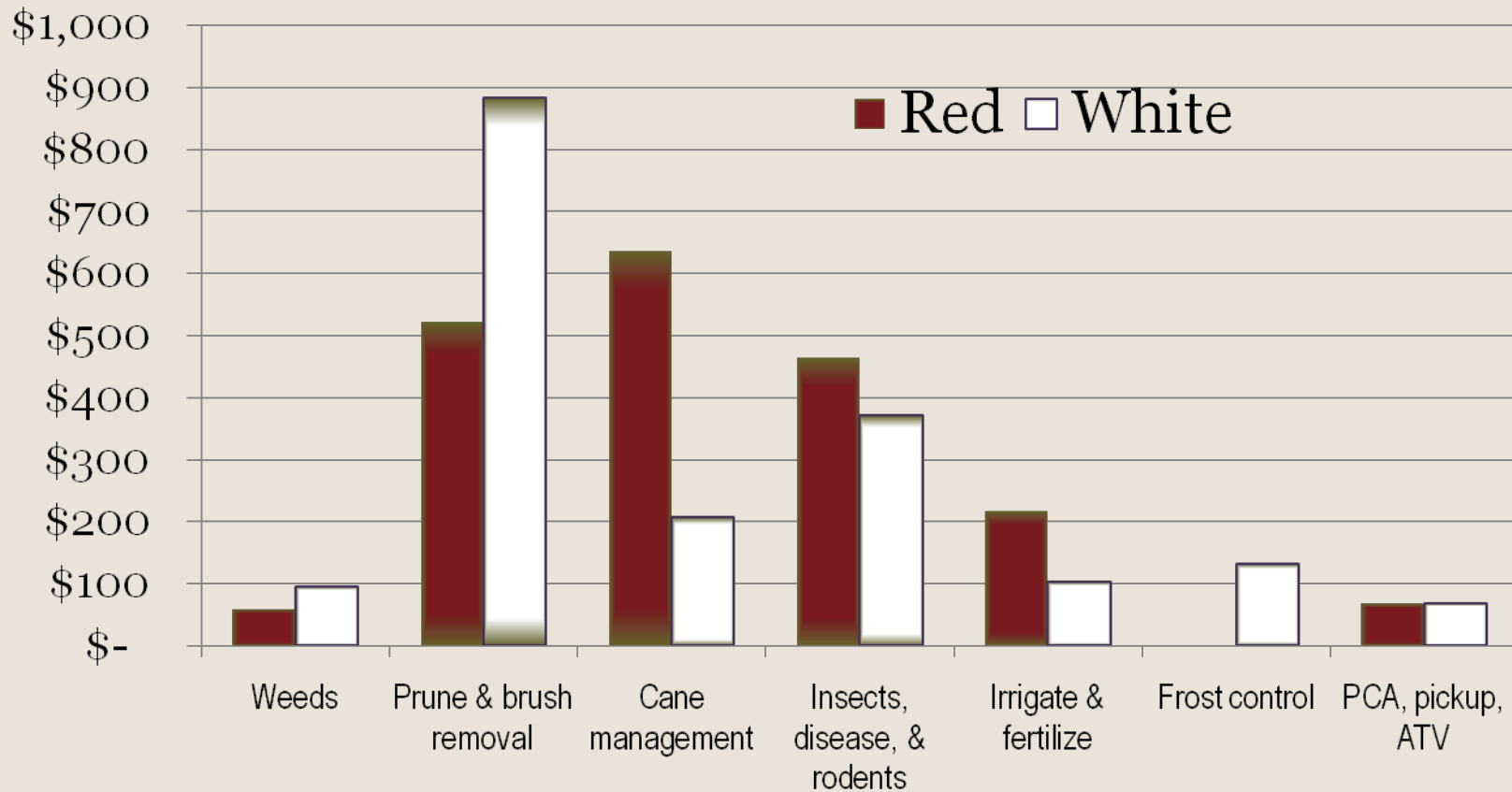
## Red winegrapes, Lake County



<b>Operation</b>	<b>Labor</b>	<b>Material</b>	<b>Fuel, lube, and repairs</b>	<b>Total</b>
Disease/insects	\$5	\$23	\$4	\$32
Disease control	\$101	\$94	\$42	\$237
Leaf removal	Custom			\$75
Insect control	\$24	\$65	\$8	\$97
Rodent control	\$12	\$6	\$2	\$20
PCA				\$30
<b>TOTAL</b>				<b>\$491</b>

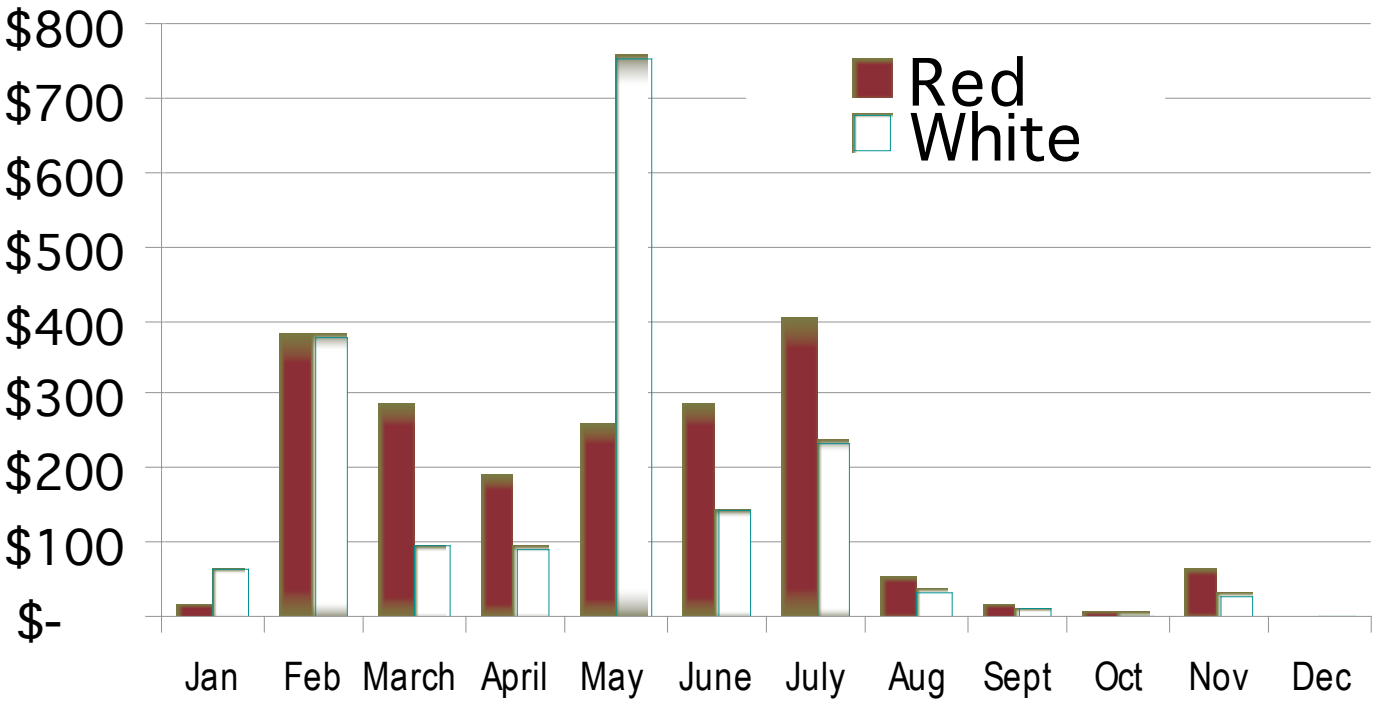
# Cultural Costs, \$ per acre

## Red and White Winegrapes, Lake County



# Monthly Cultural Costs, \$ per acre

## Red and White Winegrapes, Lake County



# 2007 Lake County Prices per Ton



Variety	Cabernet Sauvignon	Sauvignon Blanc
Low	\$350	\$600
High	\$3,419	\$1,800
Weighted Average	\$1,377	\$880
Production	9,000 tons	7,000 tons

Source: CDFA, Grape Crush Report

# Sauvignon Blanc

## Profitability at varying yields and prices



	6 tons	7 tons	8 tons
Operating costs / ton	\$417	\$362	\$321
Total cash costs / ton	\$578	\$500	\$422
Total costs / ton	\$1,172	\$1,009	\$887

Breakeven price equals the production cost per ton.

# Cabernet Sauvignon

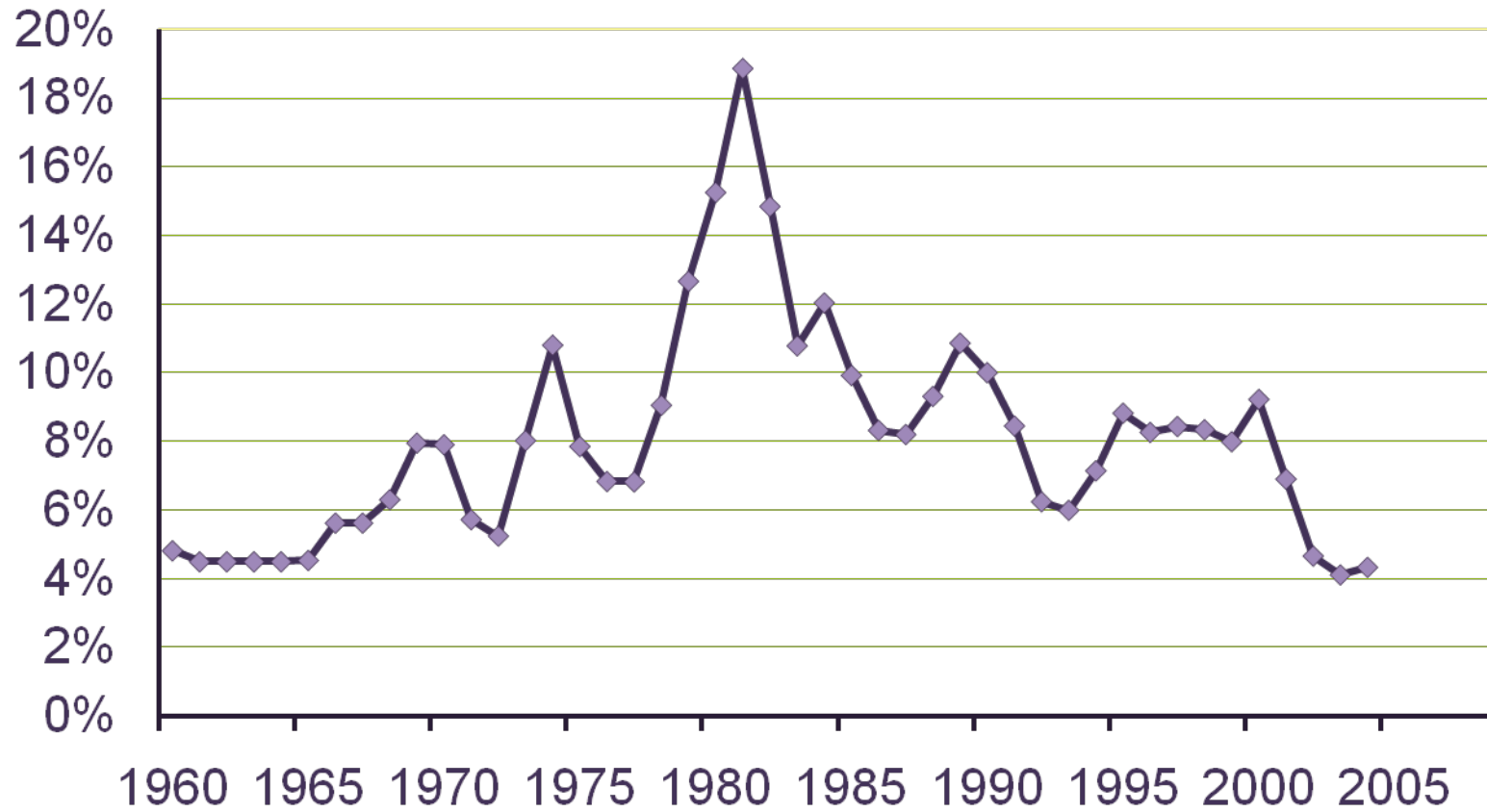
## Profitability at varying yields and prices



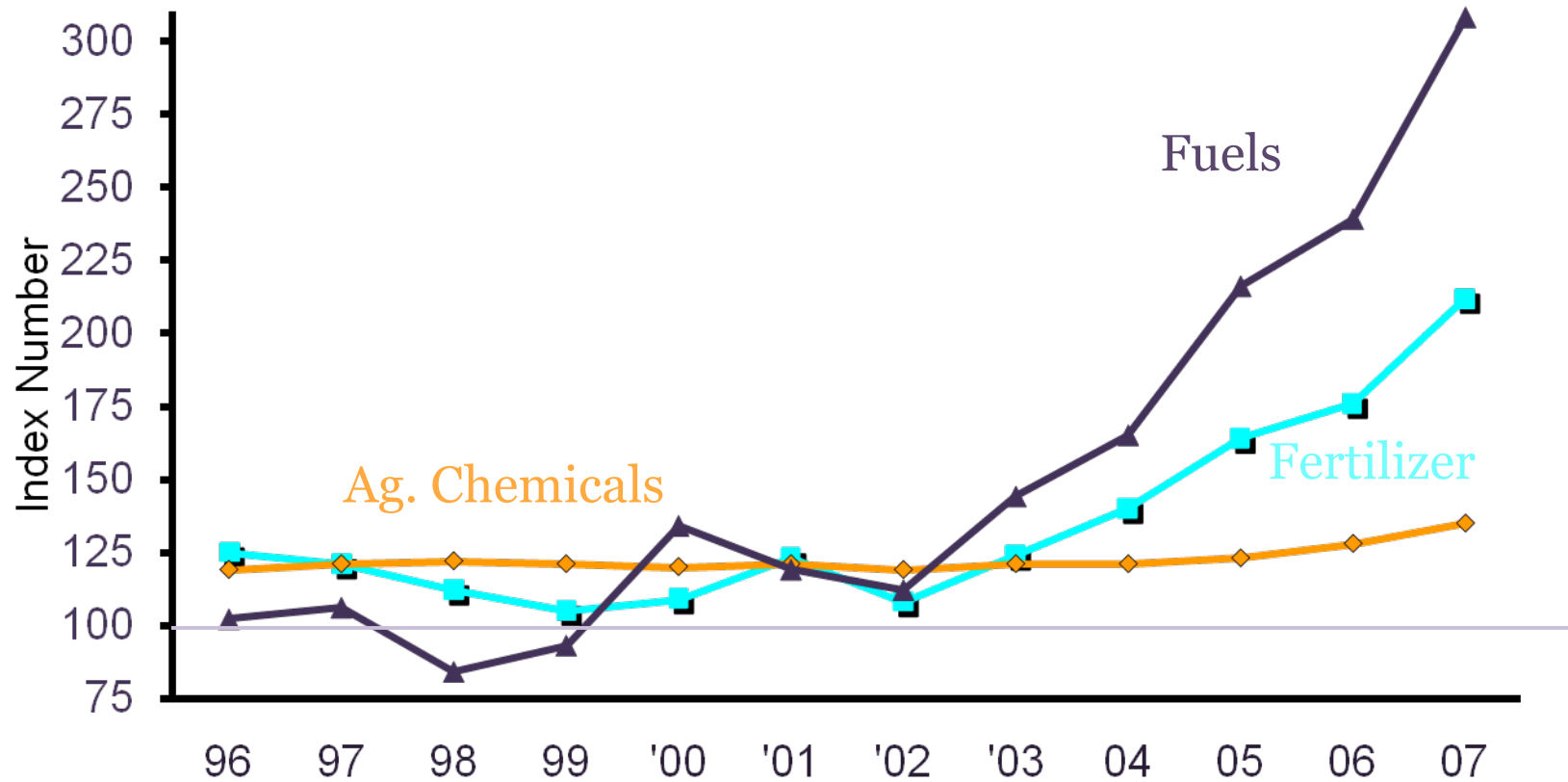
	4.75 tons	5.75 tons	6.75 tons
Operating costs / ton	\$549	\$460	\$399
Total cash costs / ton	\$768	\$642	\$553
Total costs / ton	\$1,570	\$1,304	\$1,117

Breakeven price equals the production cost per ton.

# Prime Interest Rate

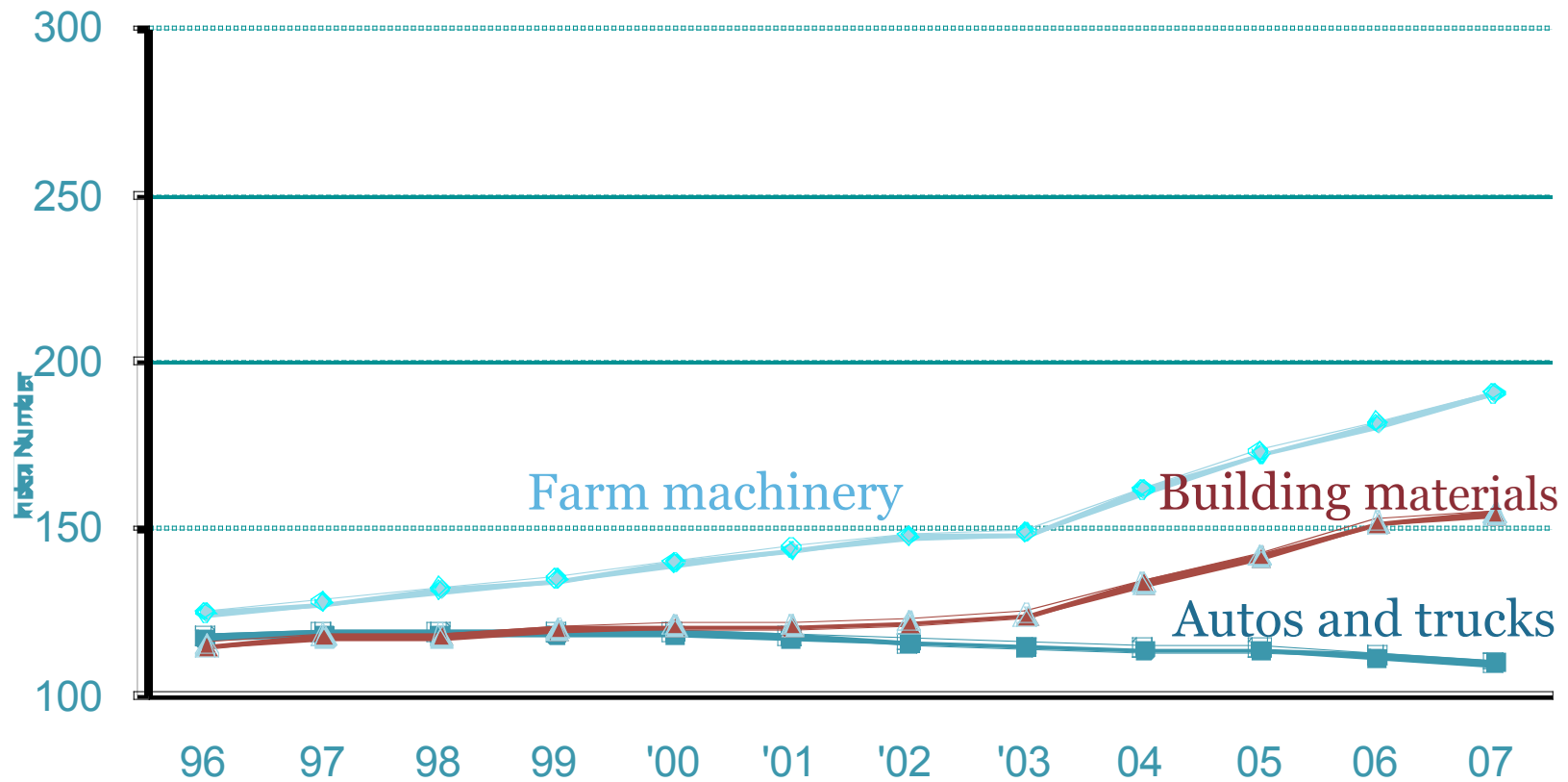


# Indexes of prices paid *by* US farmers 1990-1992 = 100



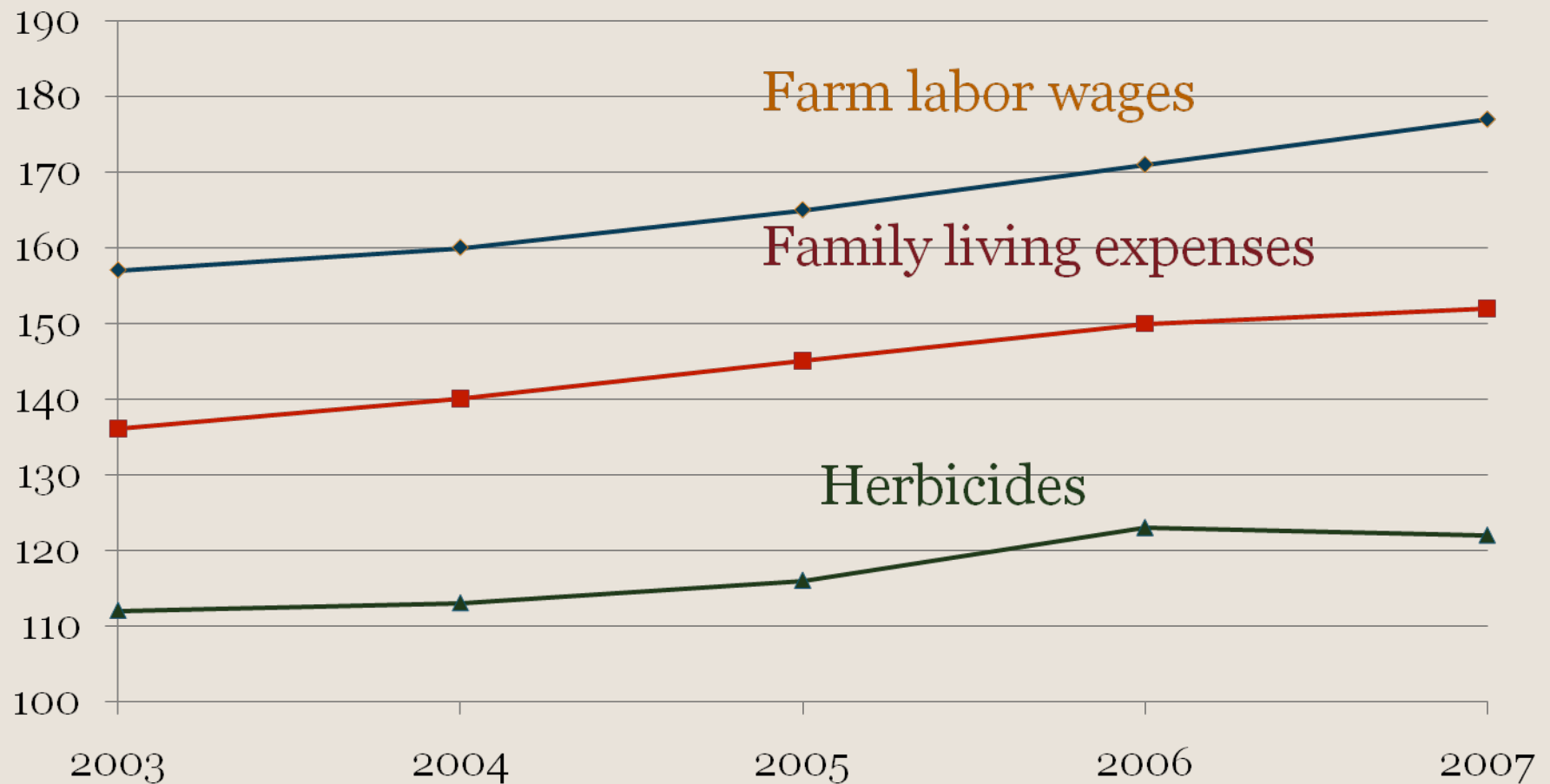
Source: National Agricultural Statistical Service, USDA.

# Indexes of prices paid *by* US farmers 1990-1992 = 100



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# Indexes of prices paid by US farmers 1990-1992 = 100



Source: NASS Agricultural Prices <http://www.nass.usda.gov/publications>

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