

Costs to Establish and Produce Olives for Oil



KAREN KLONSKY
DEPT. OF AGRICULTURAL & RESOURCE
ECONOMICS
UNIVERSITY OF CALIFORNIA, DAVIS

Cost and Return Study Authors



Paul Vossen, UCCE Sonoma and Marin Counties

Joe Grant, UCCE, San Joaquin County

Karen Klonsky, Dept. of Ag. & Resource Econ. UCD

Pete Livingston, Dept. of Ag. & Resource Econ. UCD

Super high density orchard



- San Joaquin Valley, 2007
- Over – the – row mechanical harvest
- Arbequina, Arbosana, or Koroneiki varieties
- 5' X 13' spacing, 670 trees per acre
- 80 contiguous acres
- Drip irrigation
- 40 year orchard life

Costs of Production



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

Production Costs



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

- Pruning
- Floor management
- Disease and pest control
- Irrigation and fertilization
- ATV and pickup use

Production Costs

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

Production Costs

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

Production Costs

- Cultural Costs
- Harvest Costs
- Cash Overhead
- Noncash Overhead
 - Buildings, Shop, and Field Tools
 - Irrigation System
 - Fuel Tanks
 - Equipment ownership
 - Trees

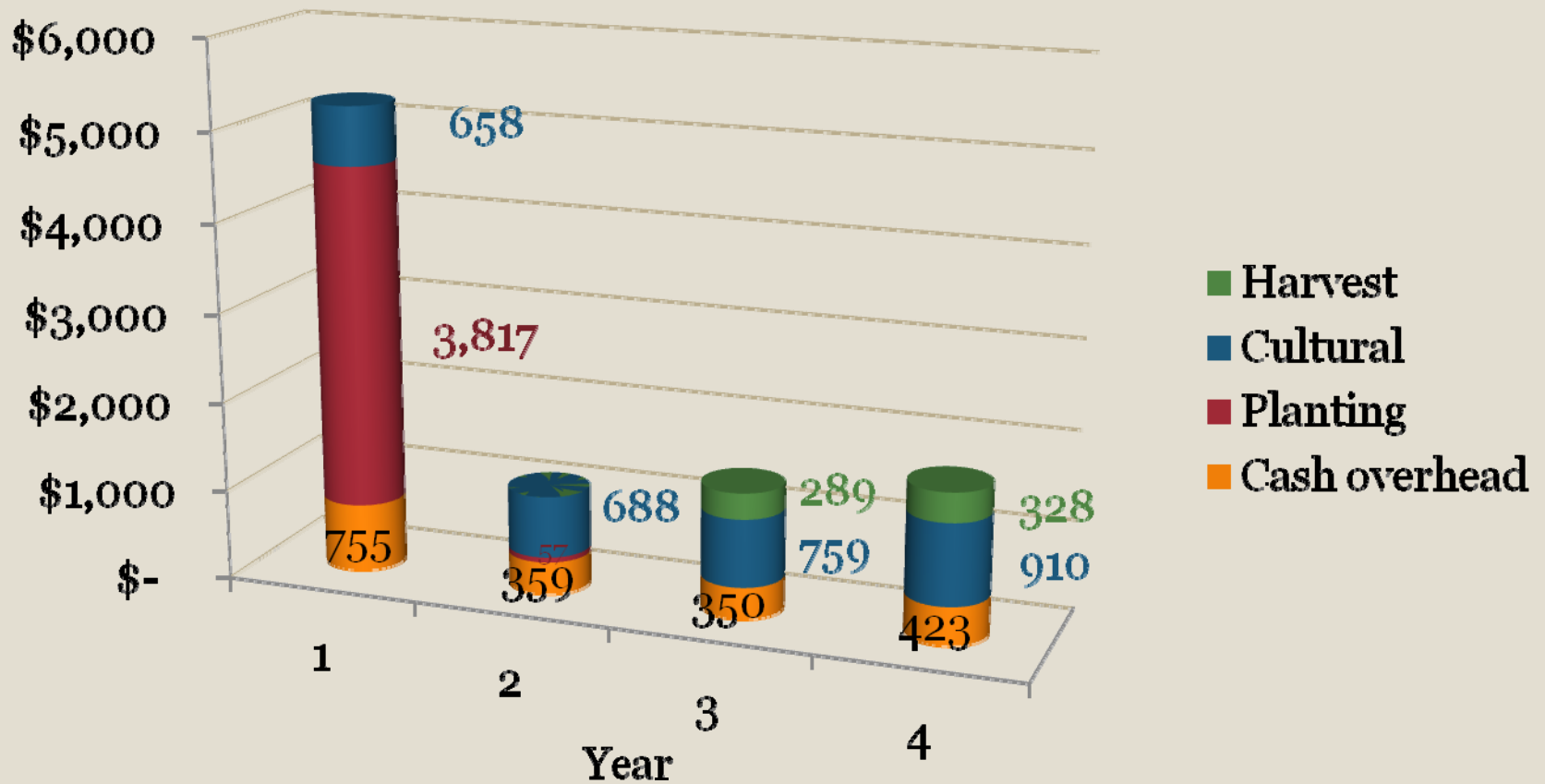
Equipment costs



- **Cultural costs**
 - Fuel and lube
 - Repairs
- **Cash overhead**
 - Insurance
 - Taxes
- **Noncash Overhead (Capital recovery)**
 - Principle and interest or ownership costs

Olives for Oil

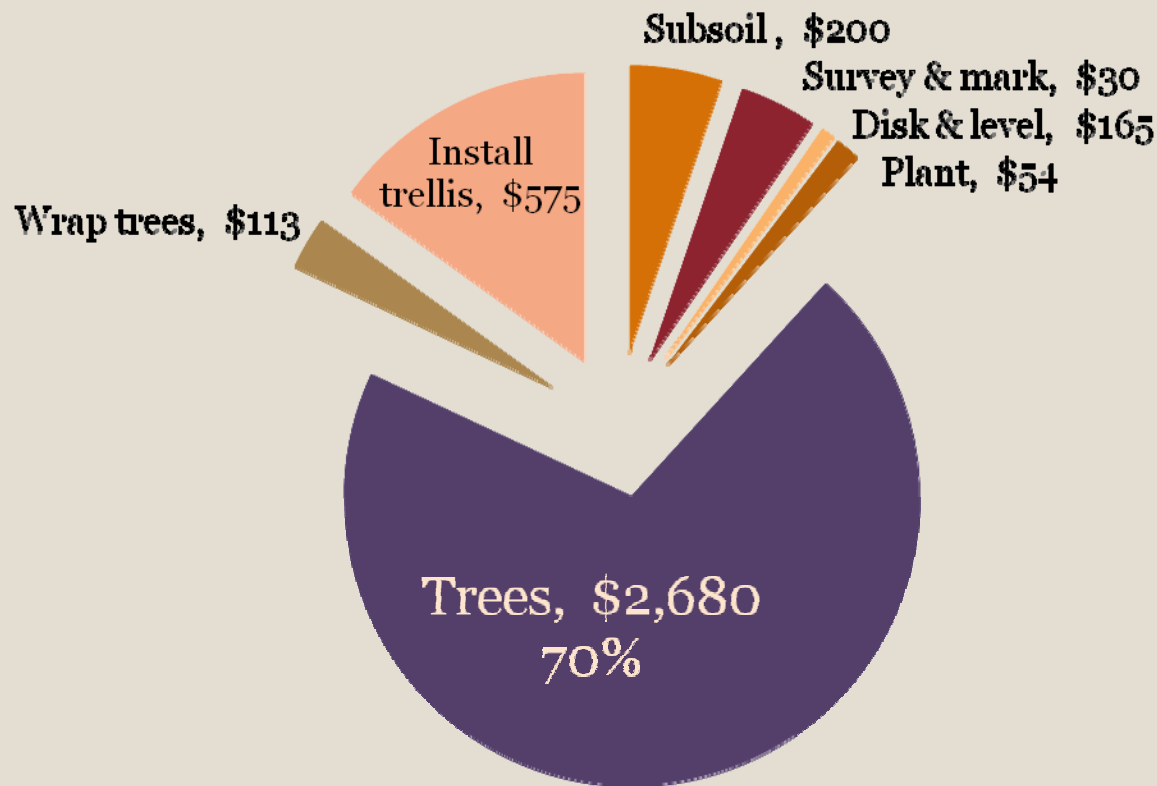
Cash costs of establishment (\$6,259/acre)*



*Does not include ownership costs for land, equipment, buildings or irrigation

Olives for Oil

Planting cost detail, \$3,817 per acre



Producing Olives for Oil

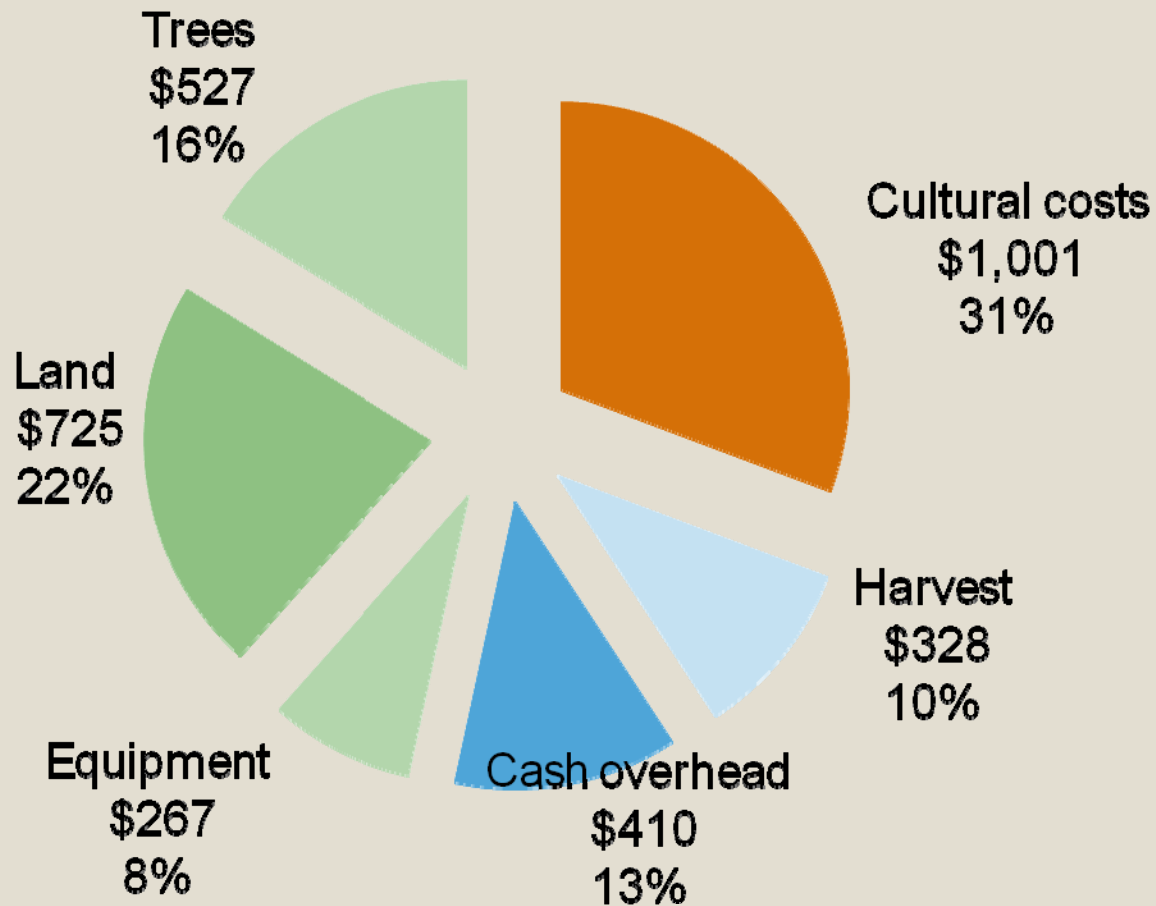
Calendar of operations



Operation	Month(s)
Strip spray weeds	March, June, Sept.
Prune trees	March, April
Irrigate and fertilize	March - October
Mow middles	April - June
Disease control	April and June
Insect control – fruit fly	June - October
Top prune trees	July
Skirt trees	August
October	Mechanical harvest

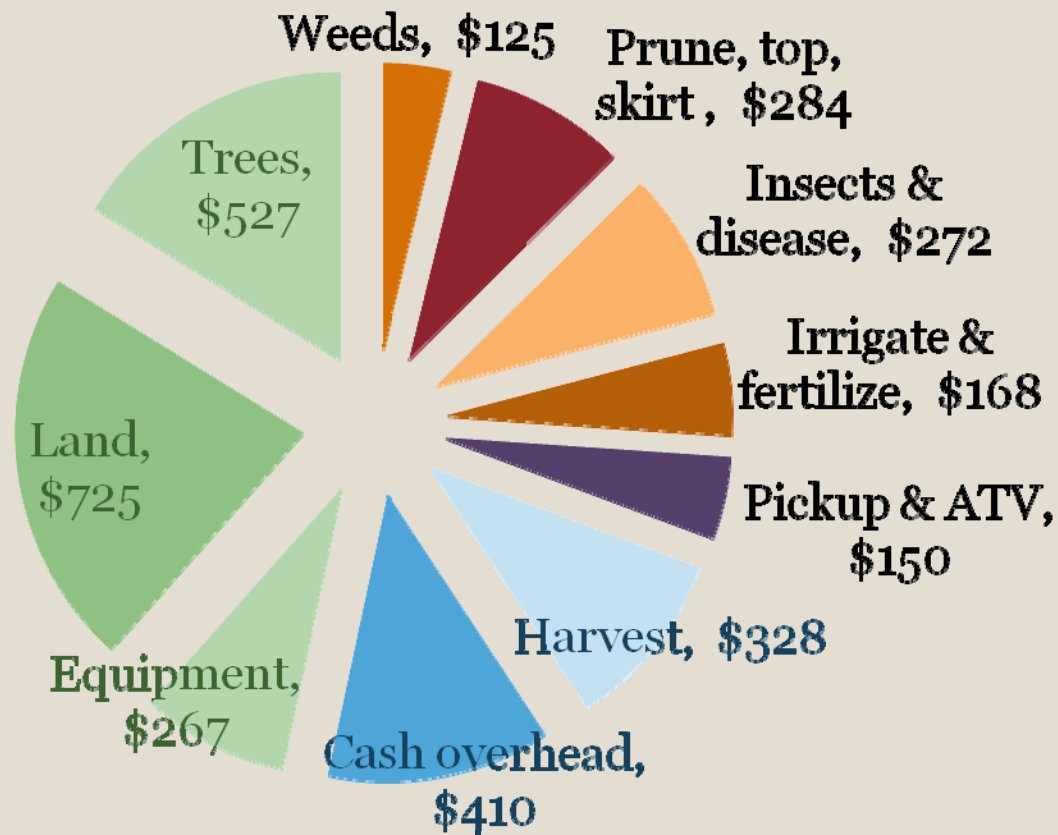
Olives for Oil

Total cost of production, \$3,258



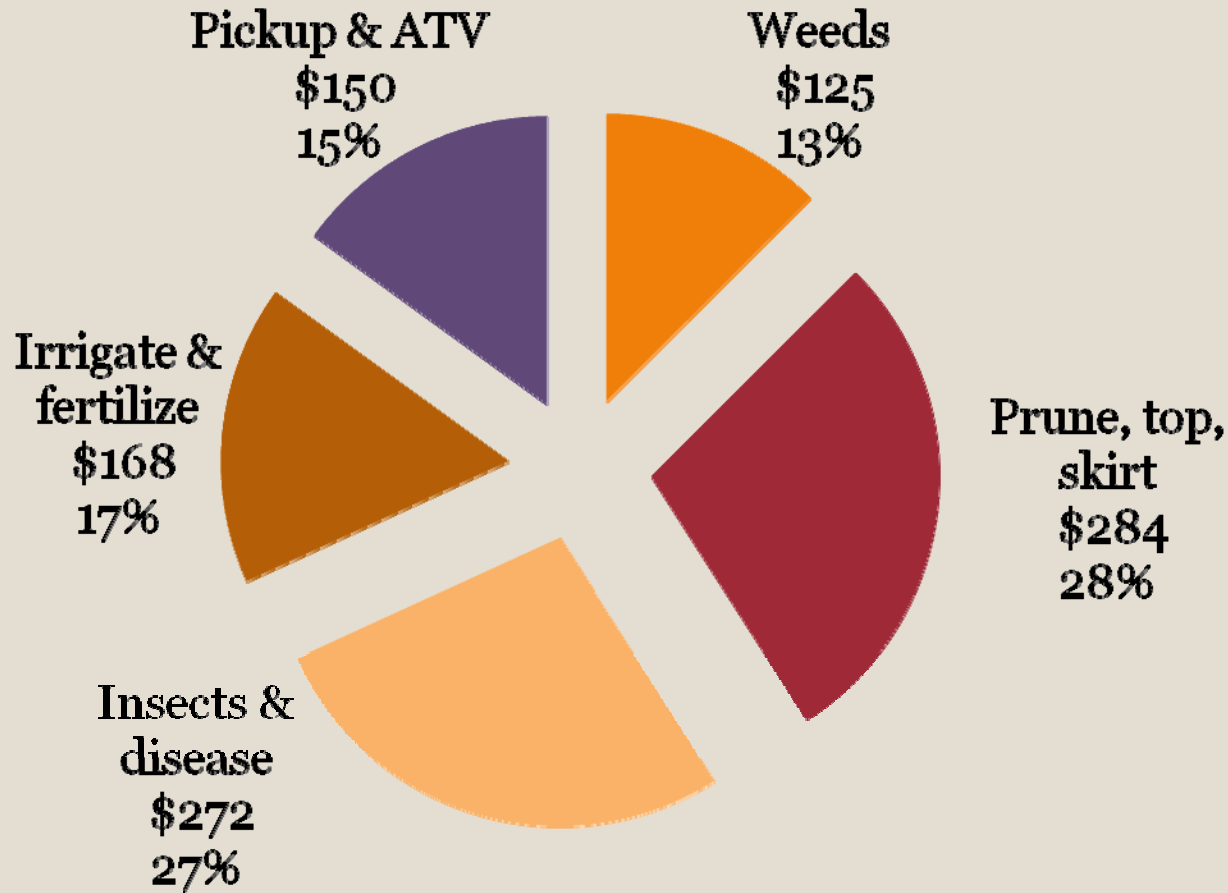
Olives for Oil

Total cost of production, \$3,258 per acre



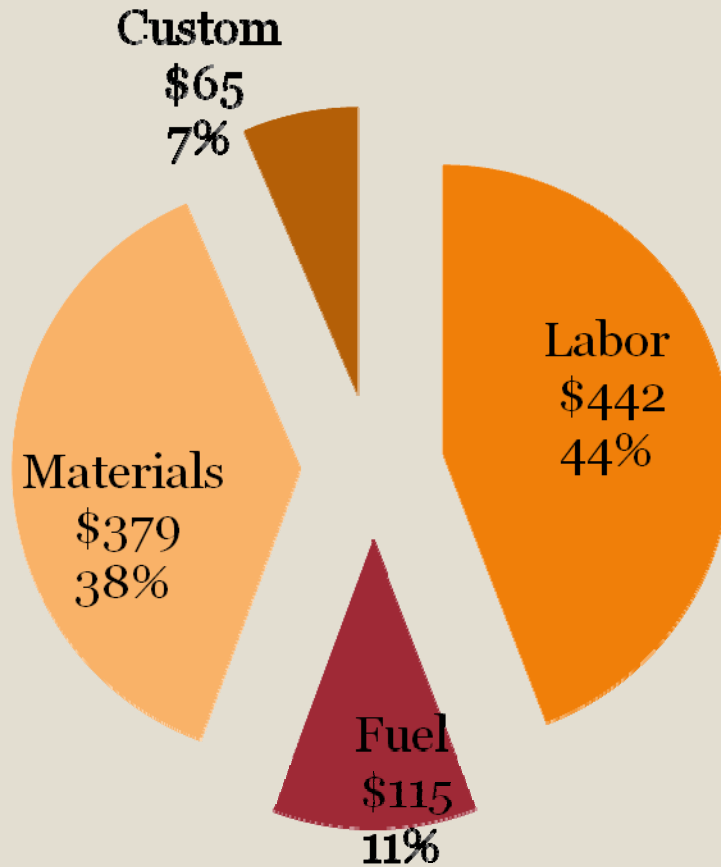
Olives for Oil

Cultural costs \$1,001 per acre



Olives for Oil

Cultural costs \$1,001 per acre



Olives for Oil

Prune, top, skirt



Operation	Months	Labor	Custom	Total
Prune	March April	219		219
Top prune	July		20	20
Skirt prune	August		45	45
Total		\$219	\$65	\$284

Olives for Oil

Weed control detail



Operation	Labor	Materials	Fuel, lube, and repairs	Total
Strip spray 3X	\$10	\$22	\$8	\$41
Mow middles 4X	10		9	19
Strip spot spray	1	1	1	3
Dormant strip	3	57	3	63
Total	24	80	21	126

Operation	Month	Materials
Strip spray 3X	March, June, September	Roundup
Mow middles 4X	April - July	
Strip spot spray	June	Roundup
Dormant strip	October	Goal, Surflan

Olives for Oil

Irrigation and fertilizer



Operation	Labor	Material	Fuel, lube, and repairs	Total
Irrigation	\$9	\$112		\$121
Fertilize - nitrogen	9	21		30
Fertilize -potassium	4	12		16
TOTAL	\$22	\$145		\$167

Operation	Month	Material
Irrigate	March - October	24 acre inches of water
Fertilize through drip	March - October	UN- 32, 45 pounds Potassium sulfate, 74 pounds

Olives for Oil

Insects and disease

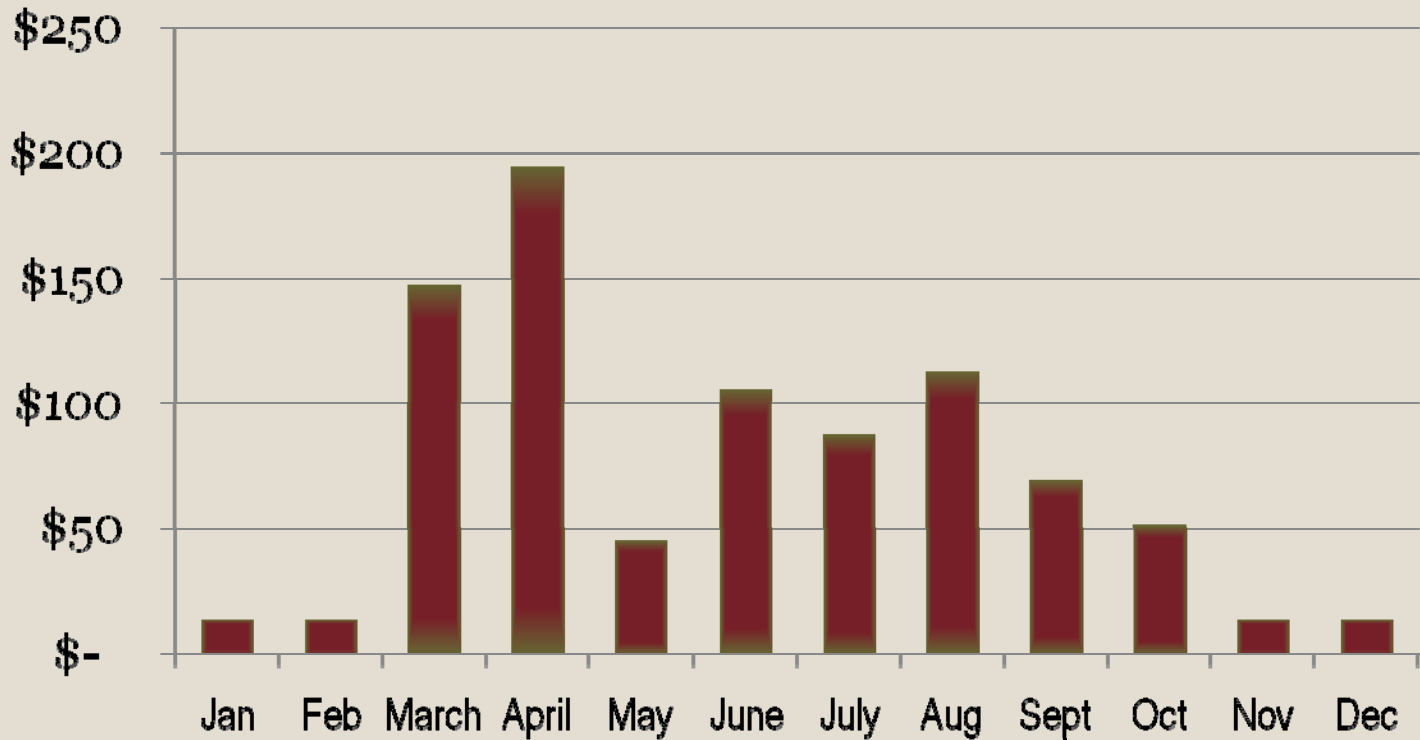


Operation	Labor	Material	Fuel, lube, and repairs	Total
Olive knot and peacock spray 2X	14	72	12	98
Black scale (10%)	7	1	6	14
Olive fruit fly 6X	41	80	38	159
TOTAL	62	153	56	271

Operation	Month	Materials
Olive knot and peacock spray 2X	April, October	Kocide
Black scale (10%)	June	Narrow spectrum oil
Olive fruit fly 6X	June – October	GF 120

Olives for Oil

Monthly cultural costs



Expected yields and prices



- **Marketable production begins in the 3rd year**
 - Year 3, 84 gallons per acre (2 tons fresh fruit)
 - Year 4, 189 gallons per acre (4.5 tons fresh fruit)
 - Year 5 and after, 210 gallons per acre (5 tons fresh fruit)
- **Expected yield range: 147 – 273 gallons per acre**
- **Expected price range: \$9 – \$15 per gallon**

Production Costs Terminology

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



Operating costs

Production Costs Terminology

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



Cash costs

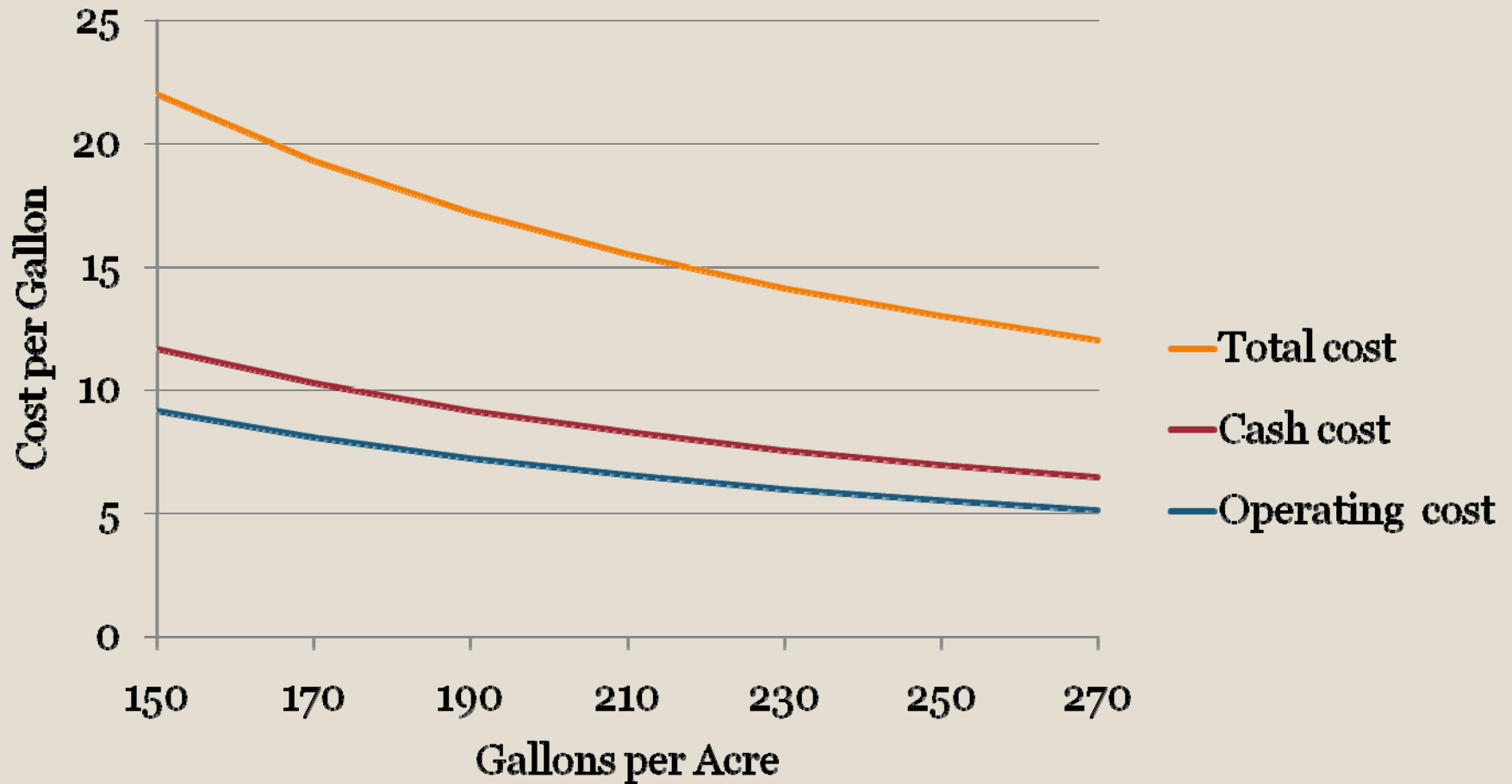
Production Costs Terminology

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

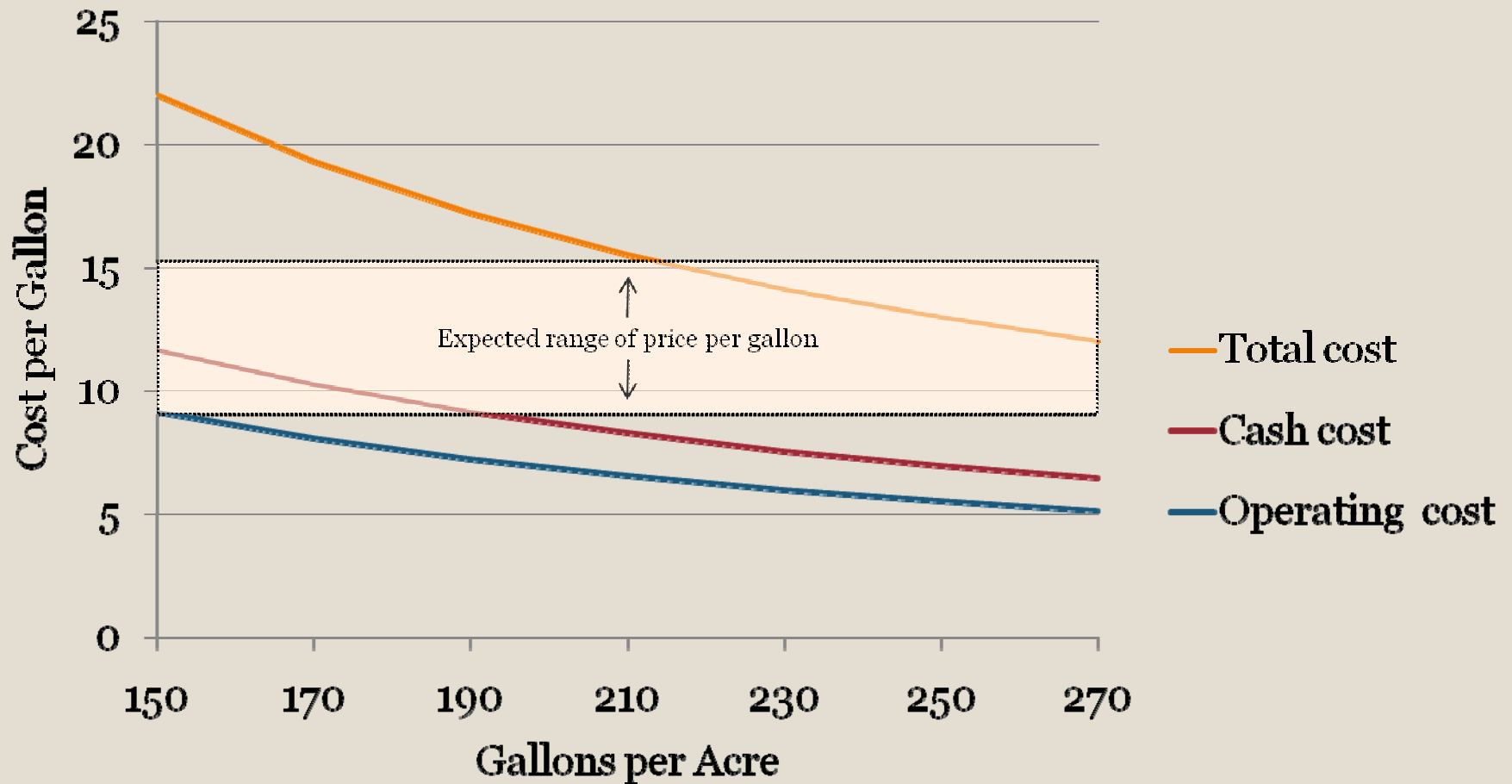


Total costs

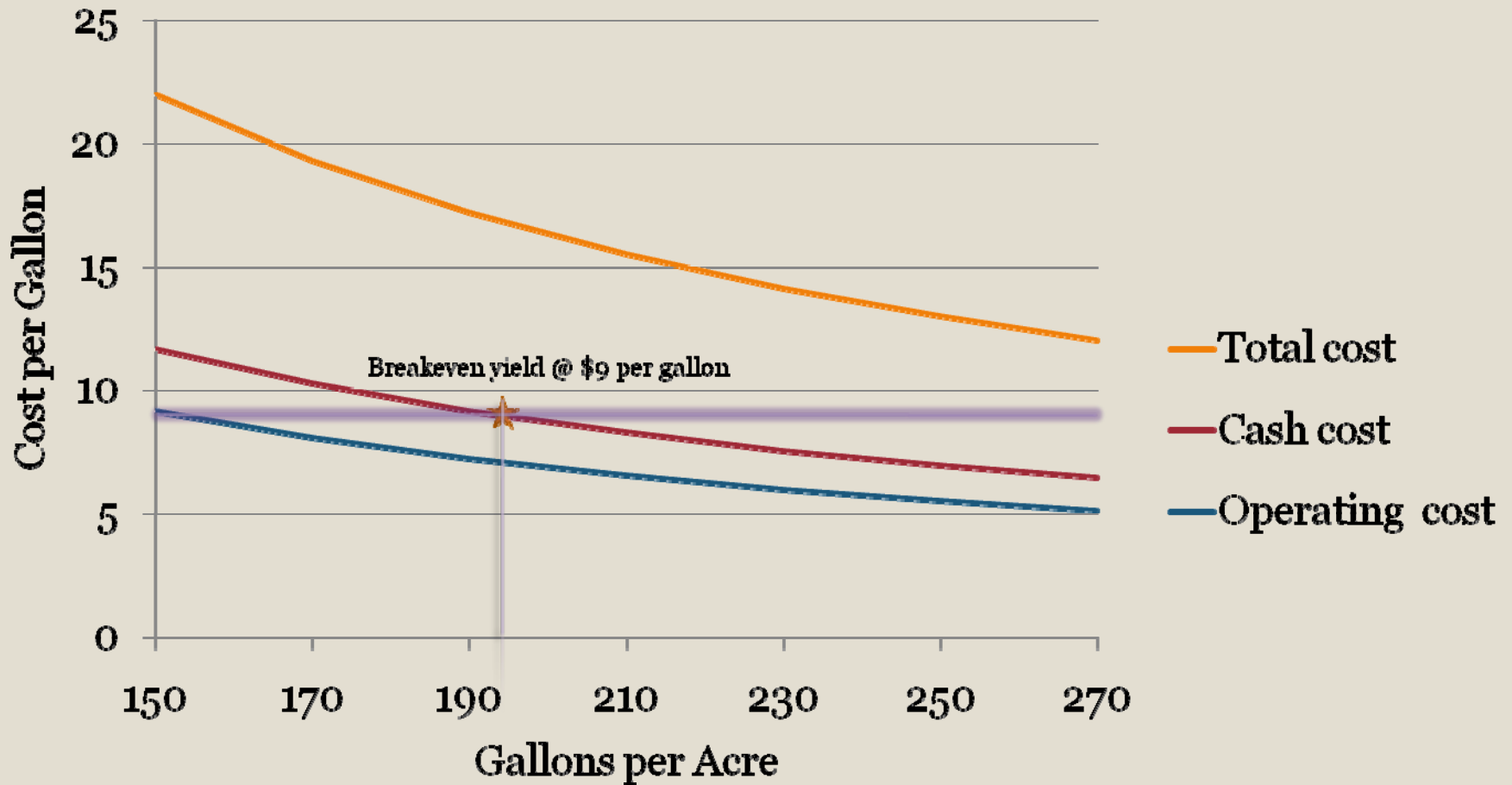
Costs per gallon at varying yields



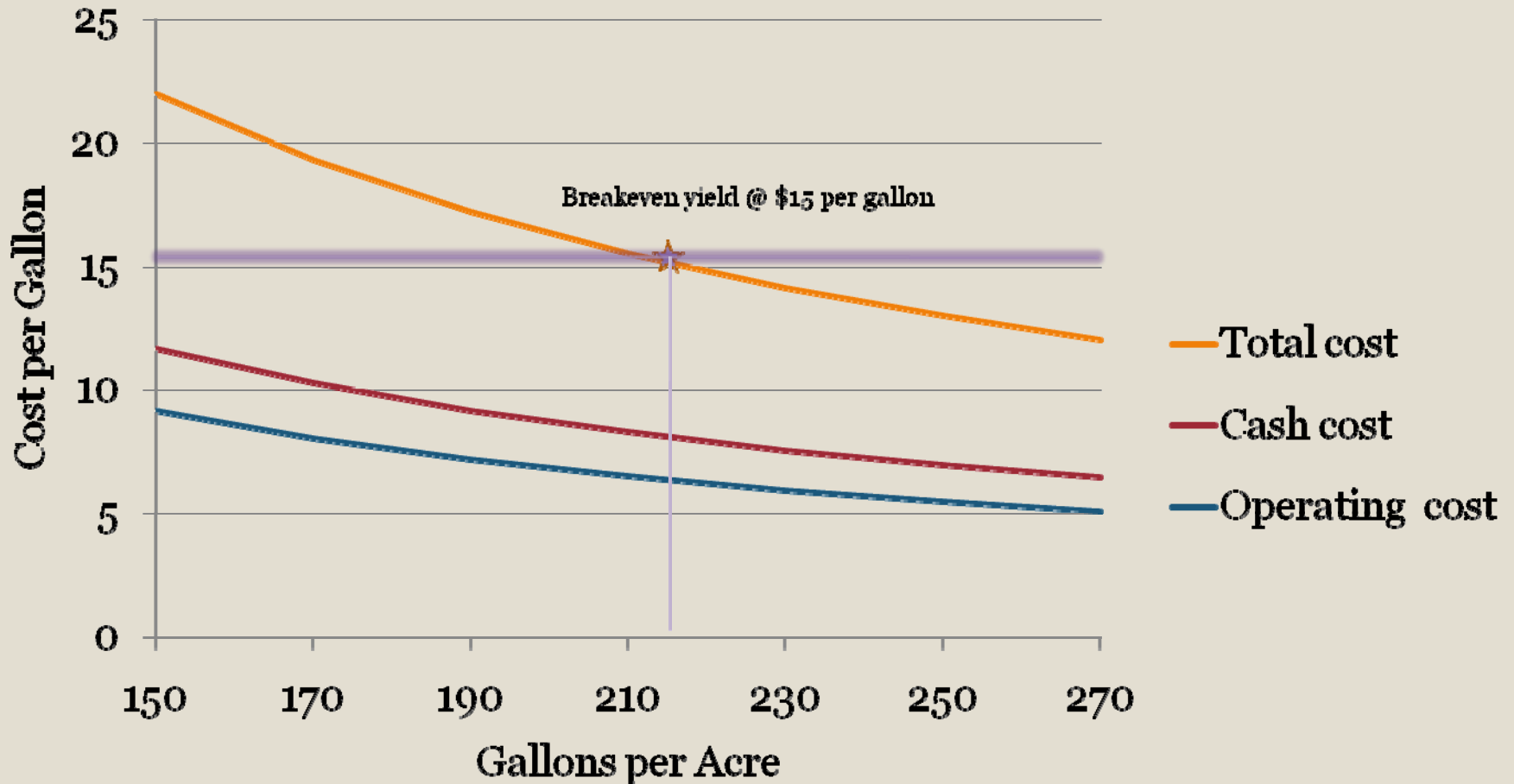
Costs per gallon at varying yields



Breakeven Yield at \$9 per Gallon



Breakeven Yield at \$15 per Gallon



External Cost Factors



Interest rates

Machinery costs

Autos and tractors

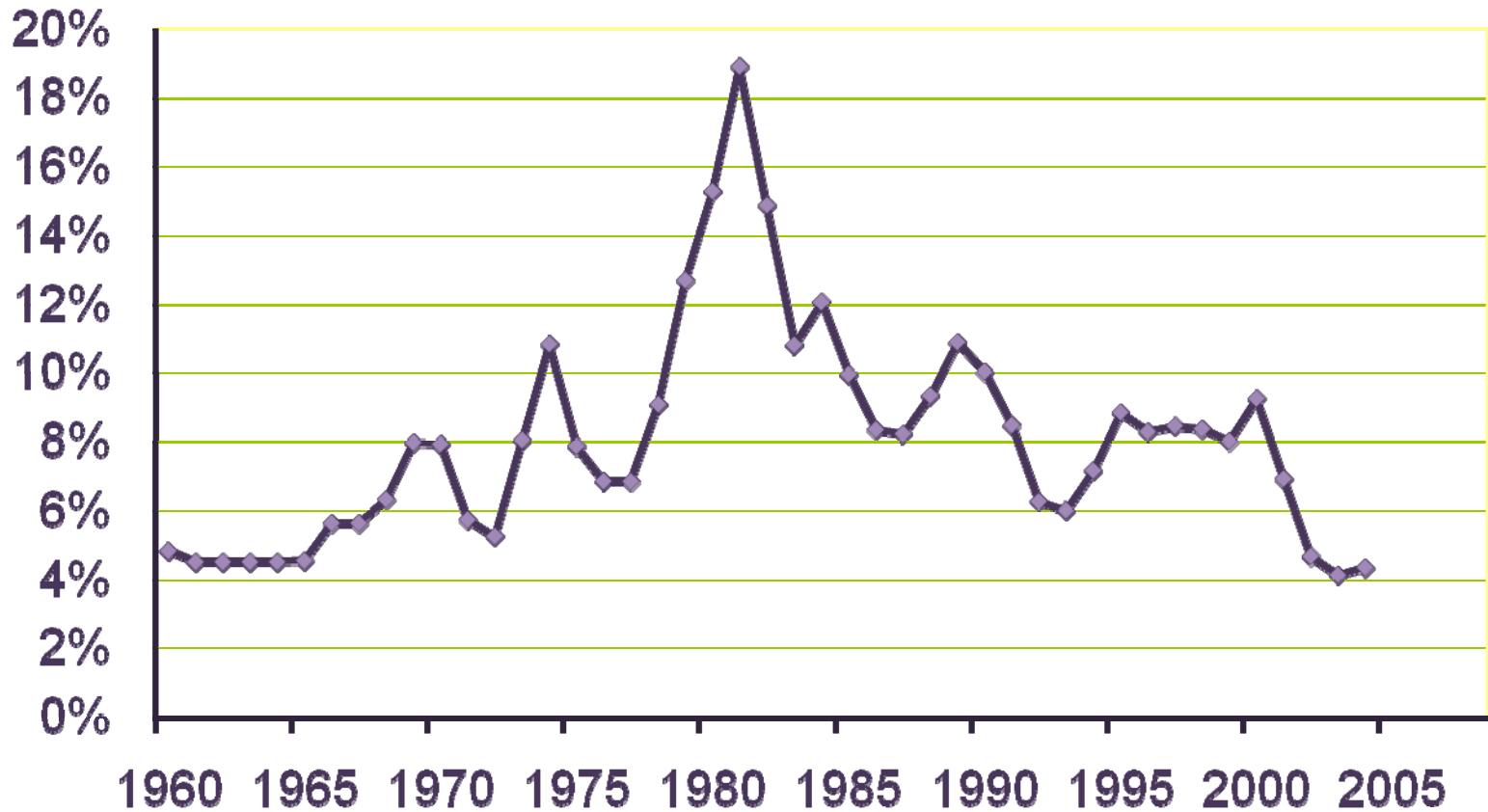
Labor

Fuel

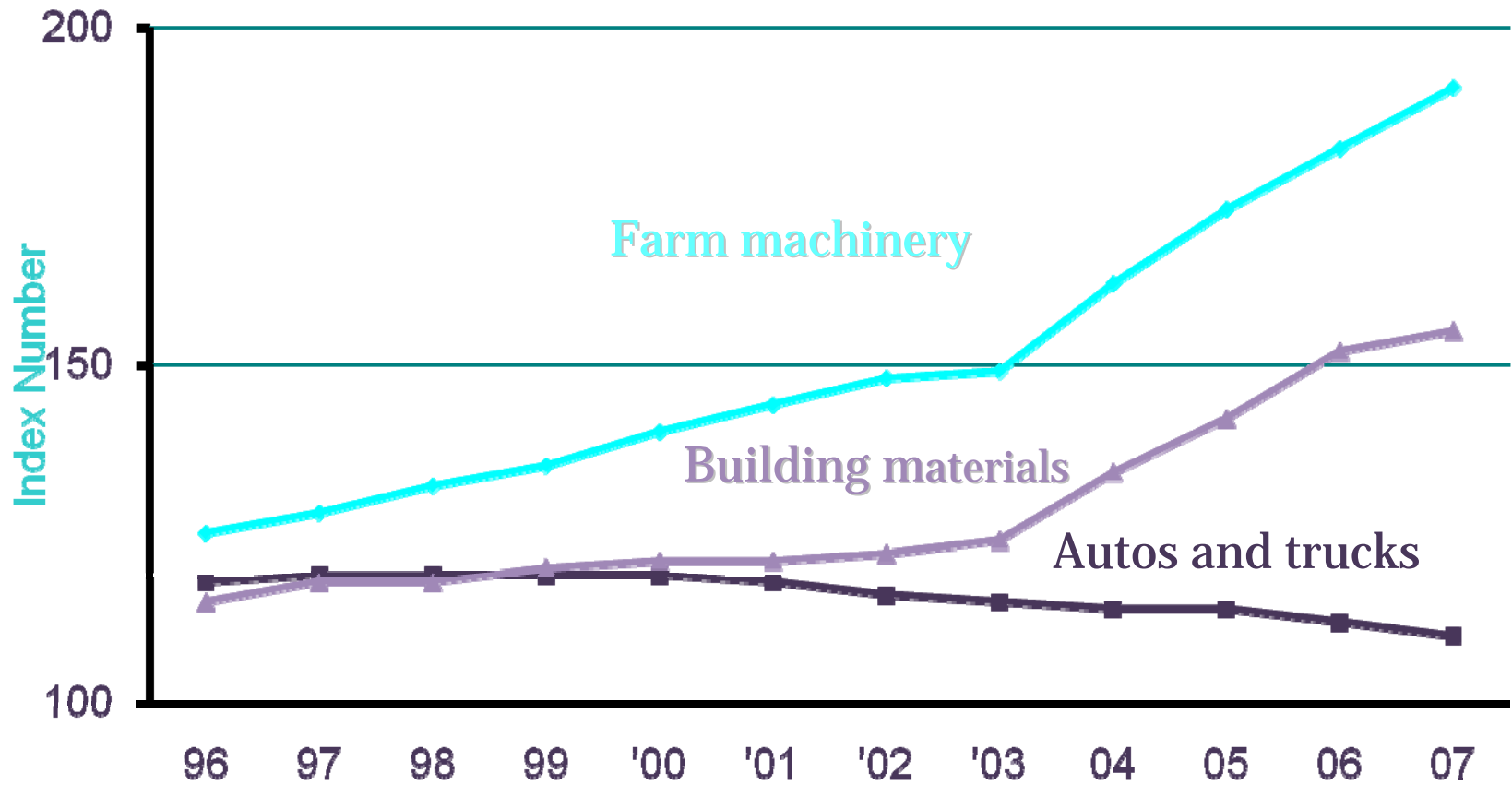
Ag chemicals

Cost of living

Prime Interest Rate

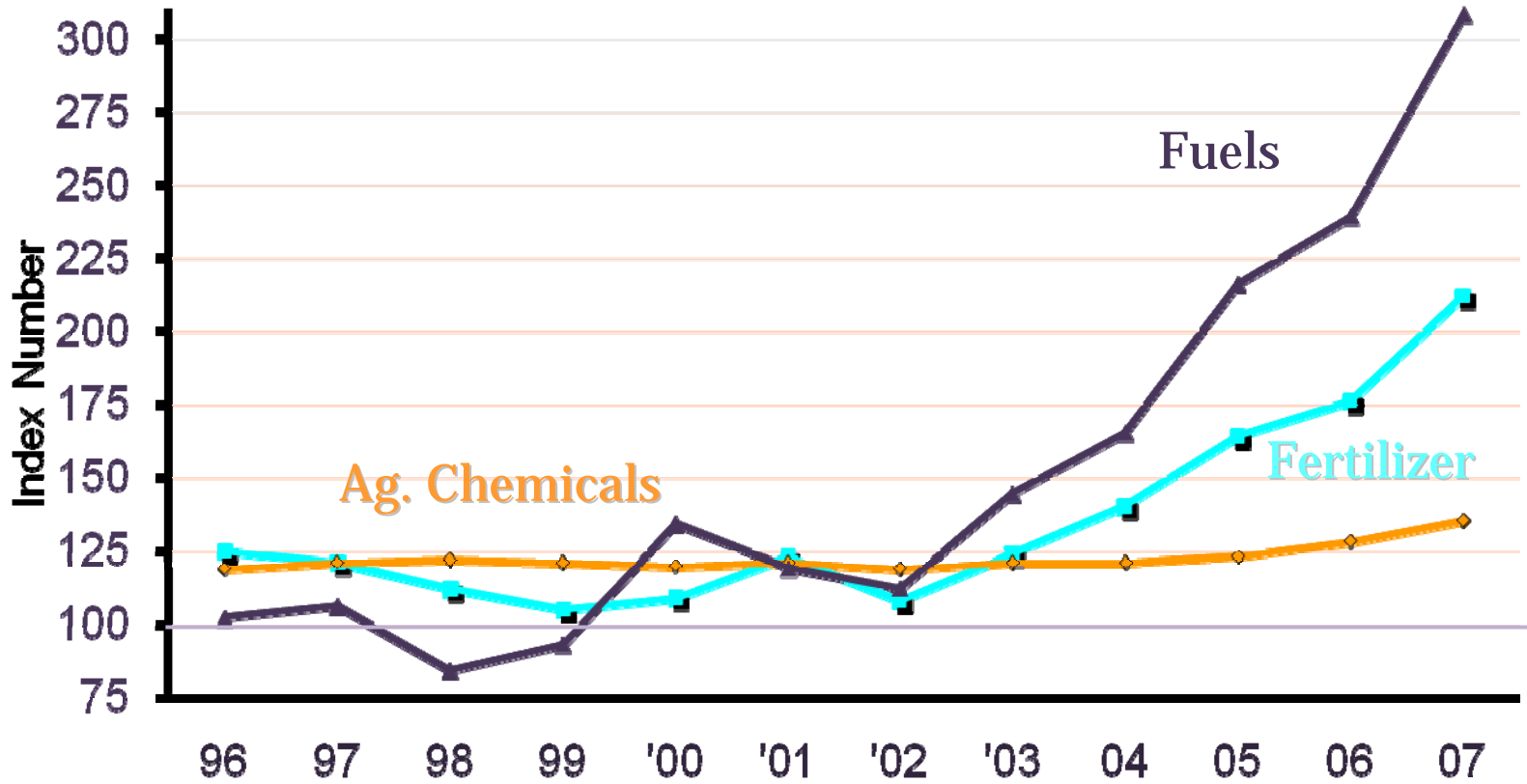


Indexes of prices paid *by* US farmers 1990-1992 = 100



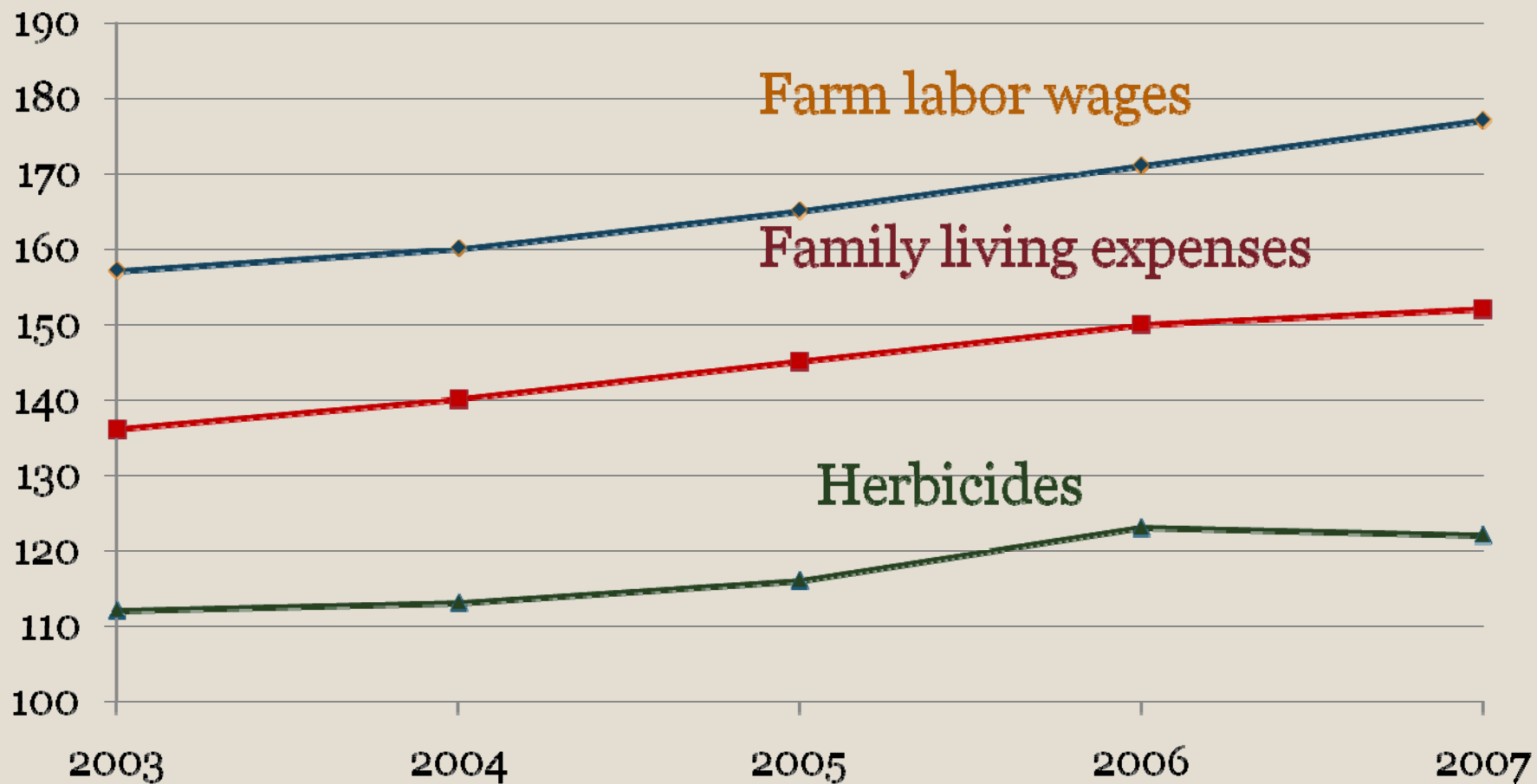
Source: National Agricultural Statistical Service, USDA.

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



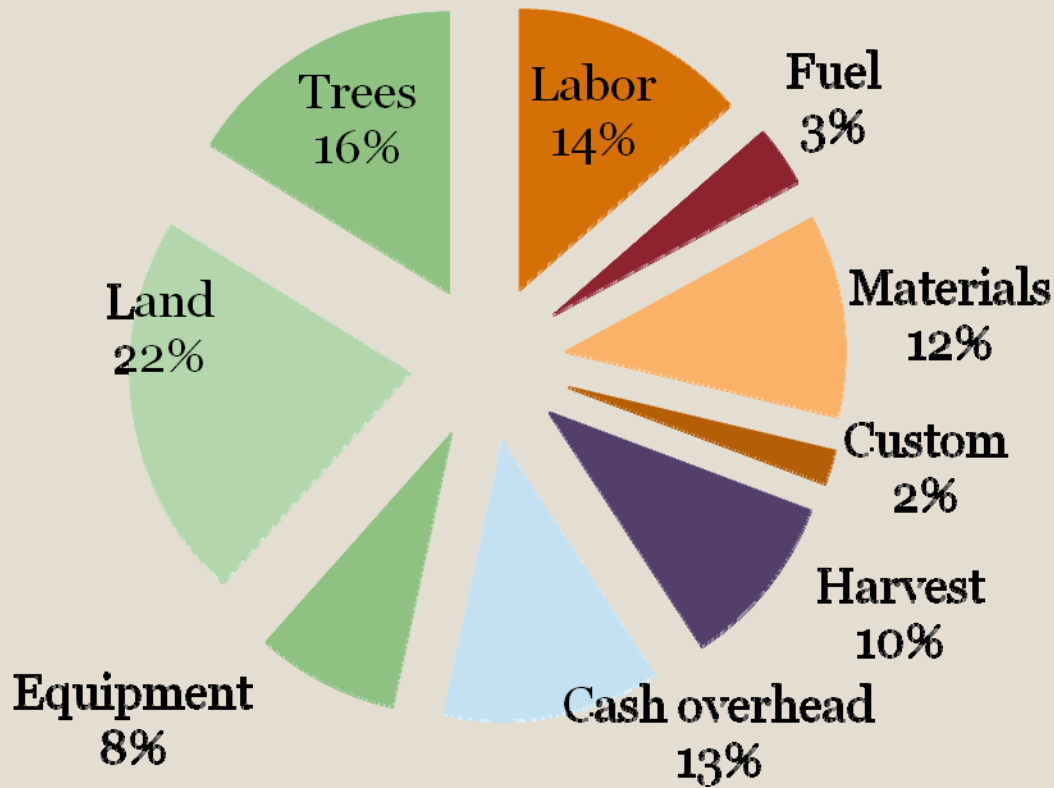
Source: National Agricultural Statistical Service, USDA.

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



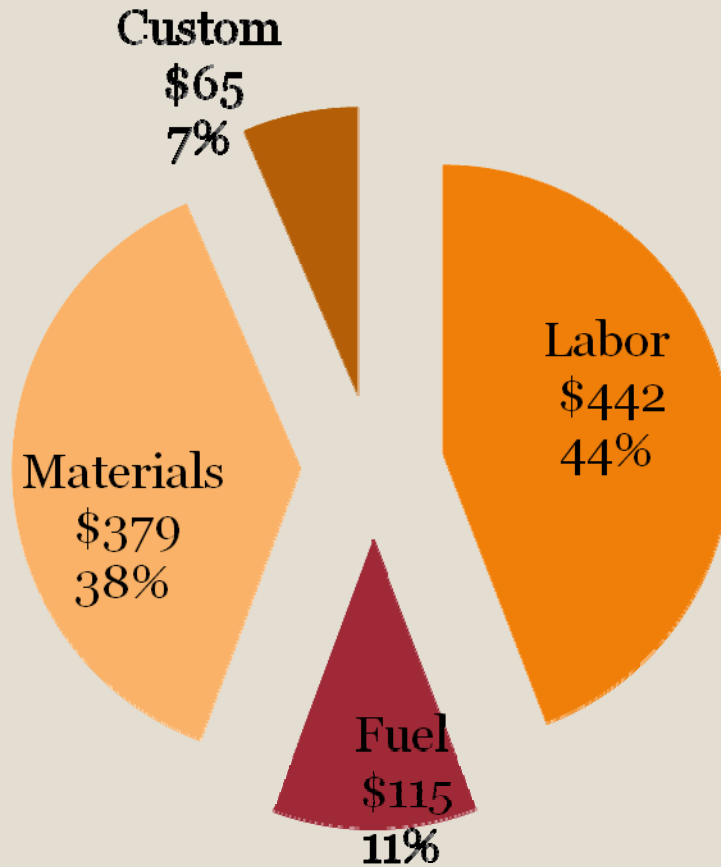
Olives for Oil

Total cost of production, \$3,258 per acre



Olives for Oil

Cultural costs \$1,001 per acre



Advertisement



Agricultural &
Resource Economics
UCDAVIS

<http://coststudies.ucdavis.edu>

