

Economics of Organic Strawberries / Vegetables Rotations

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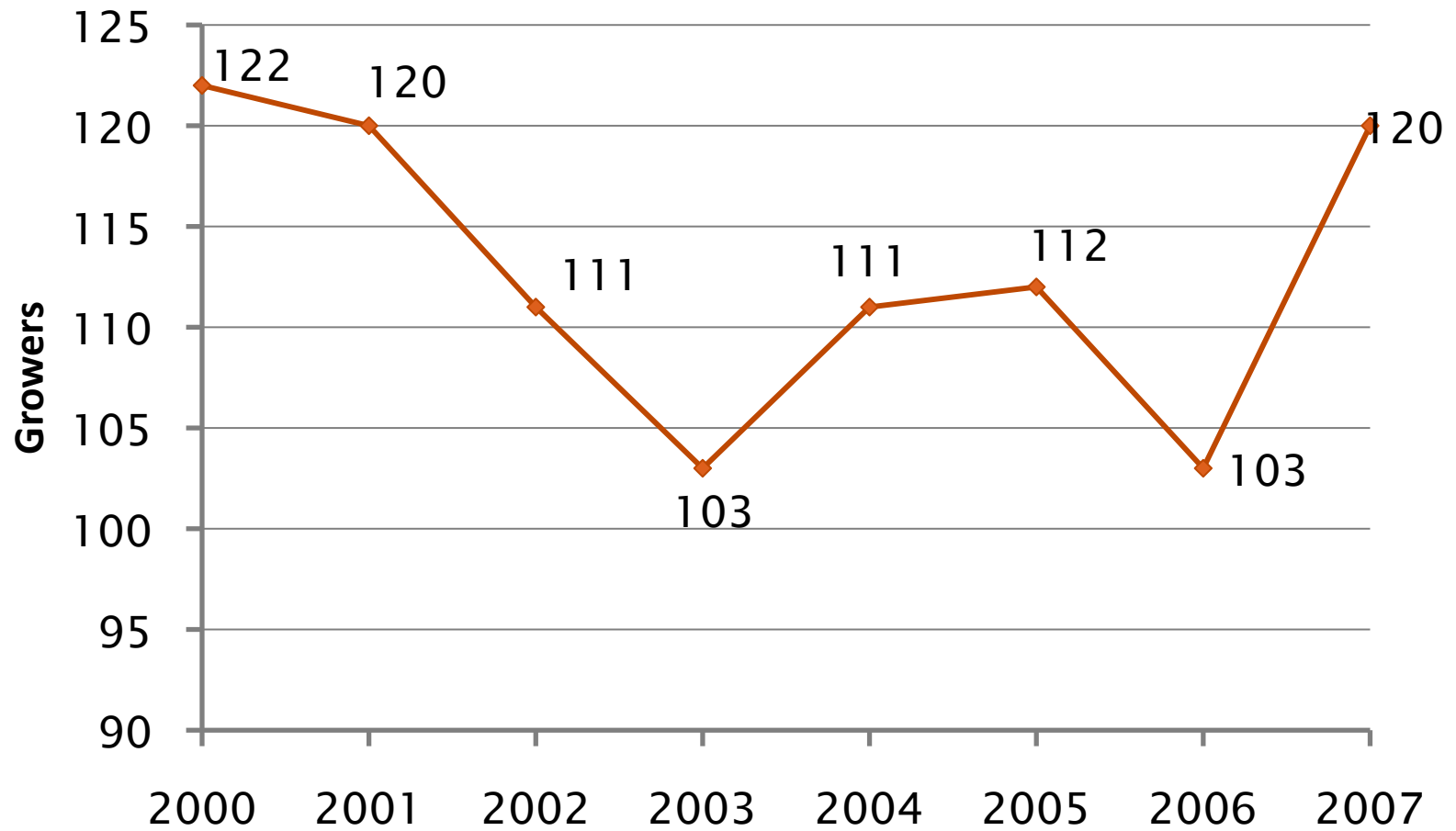
Organic and Conventional Strawberry Production in CA

Organic growers and acreage

Conventional acreage

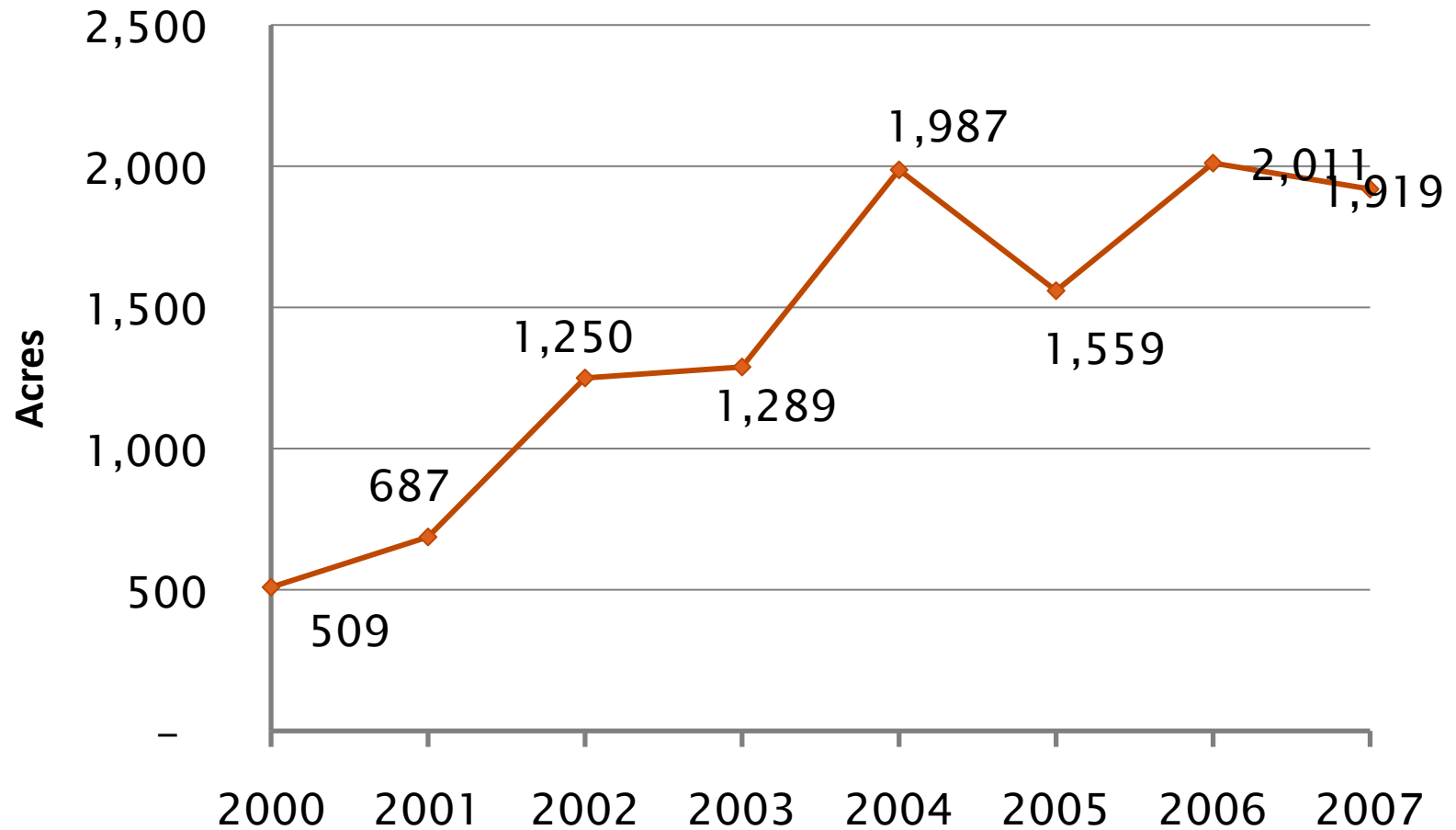
Organic sales

CA Organic Strawberry Growers



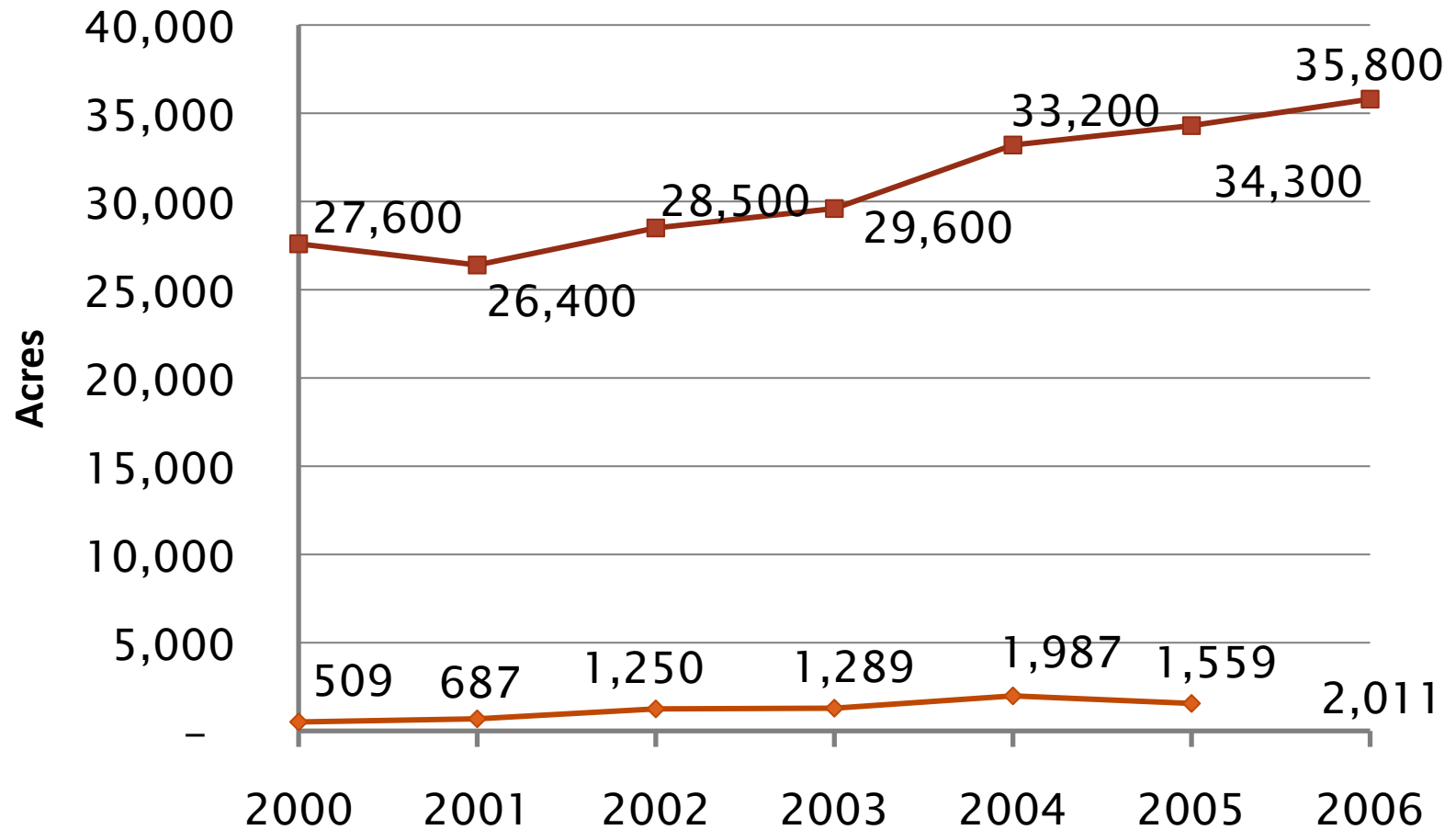
Source: CDFA registration

CA Organic Strawberry Acreage



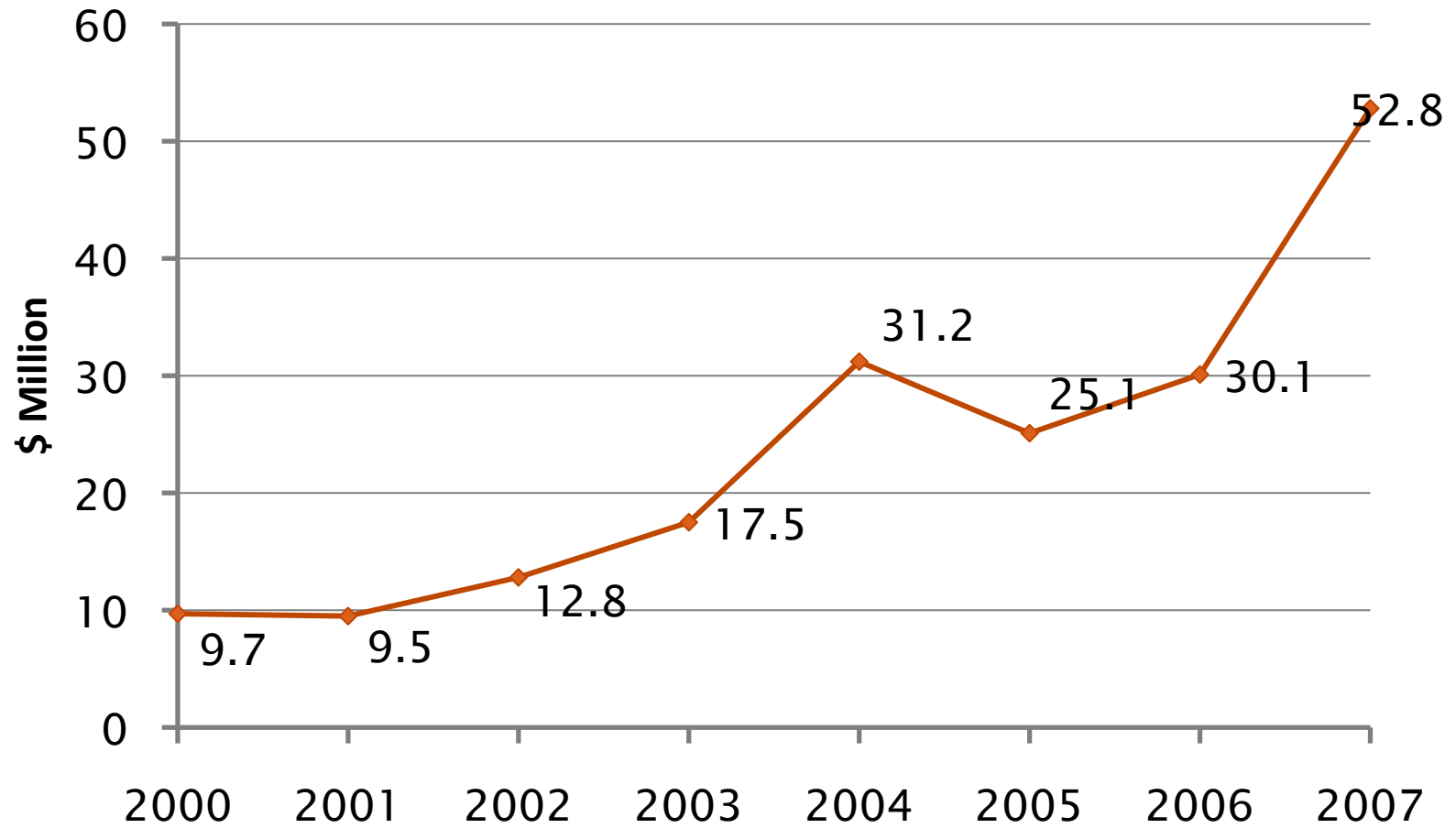
Source: CDFA registration

CA Strawberry Acreage



Source: CDFA registration

CA Organic Strawberry Sales

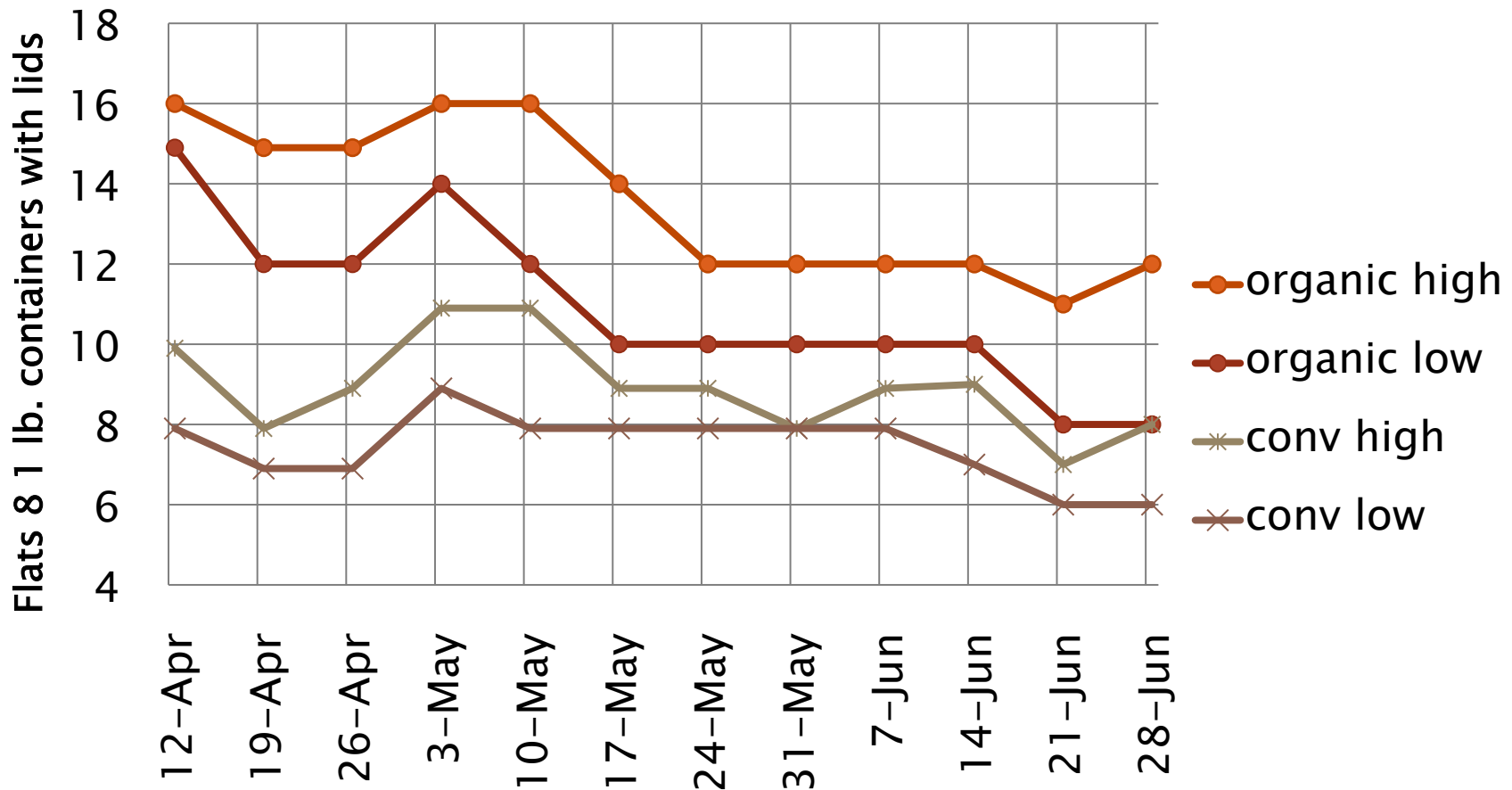


Source: CDFA registration

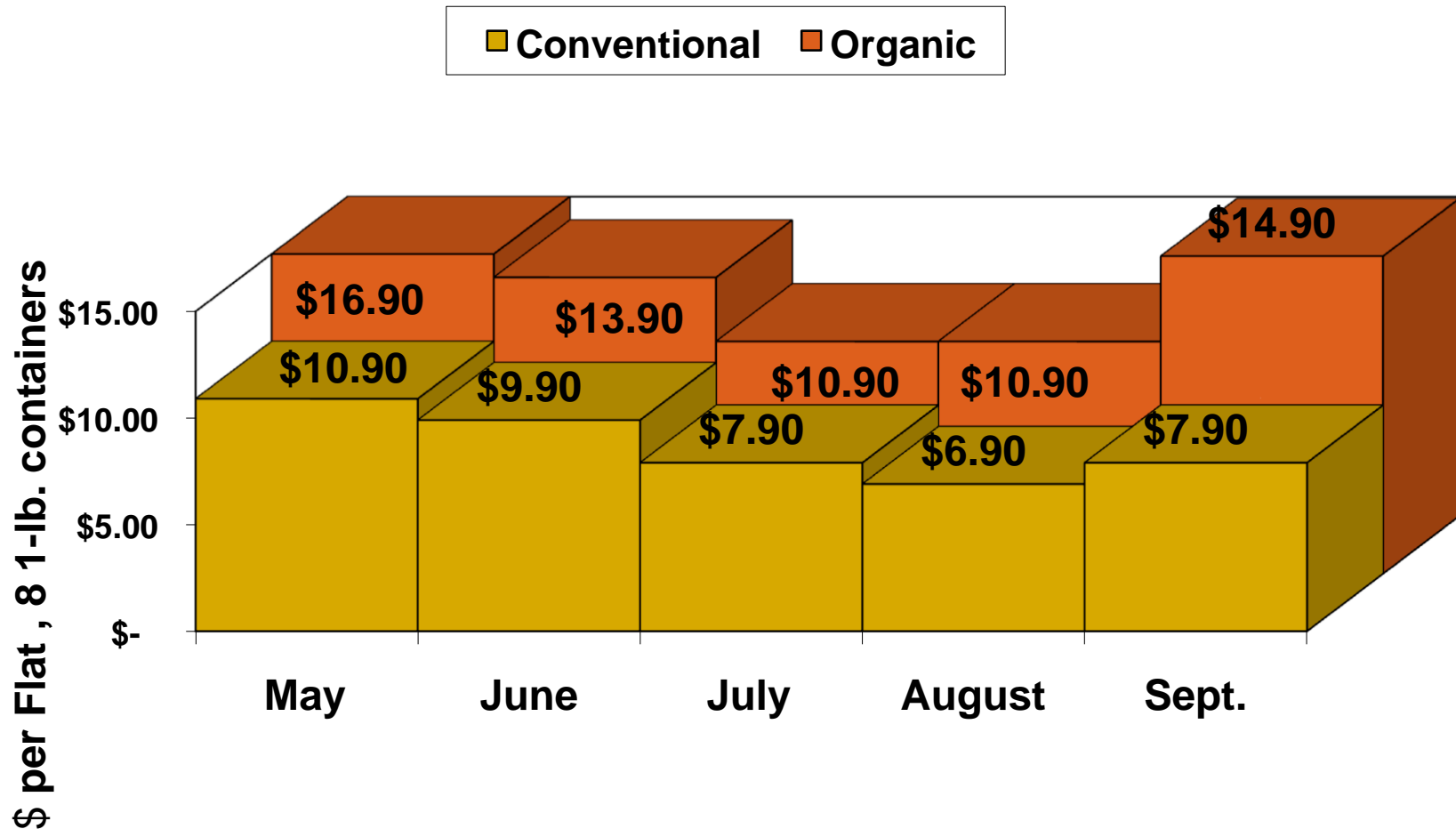
Market Trends and Prices

Shipping point prices – Watsonville Salinas
Terminal market – Boston from CA

Strawberry F.O.B. prices Salinas - Watsonville 2009

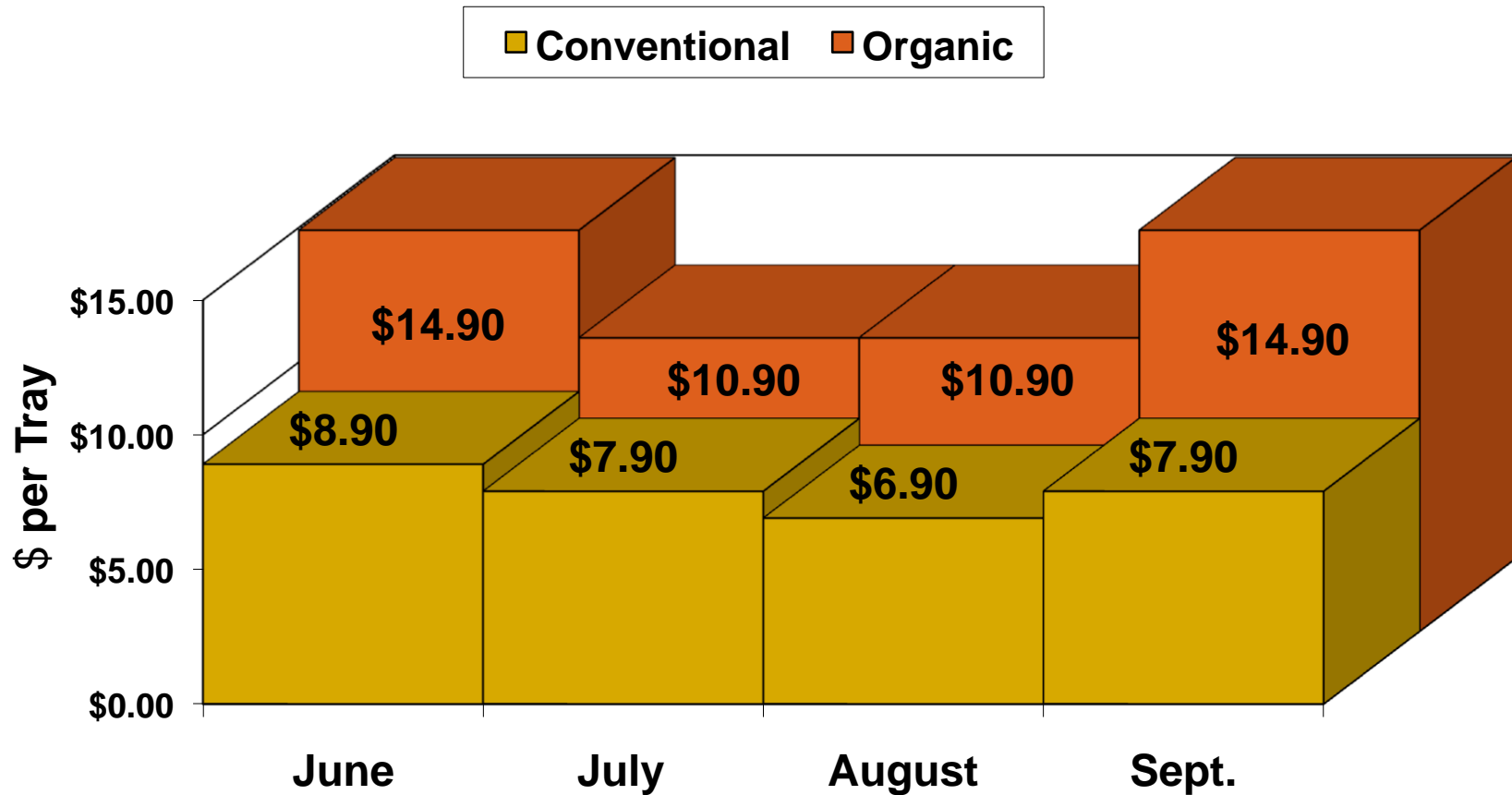


High strawberry F.O.B. prices Salinas–Watsonville 2008



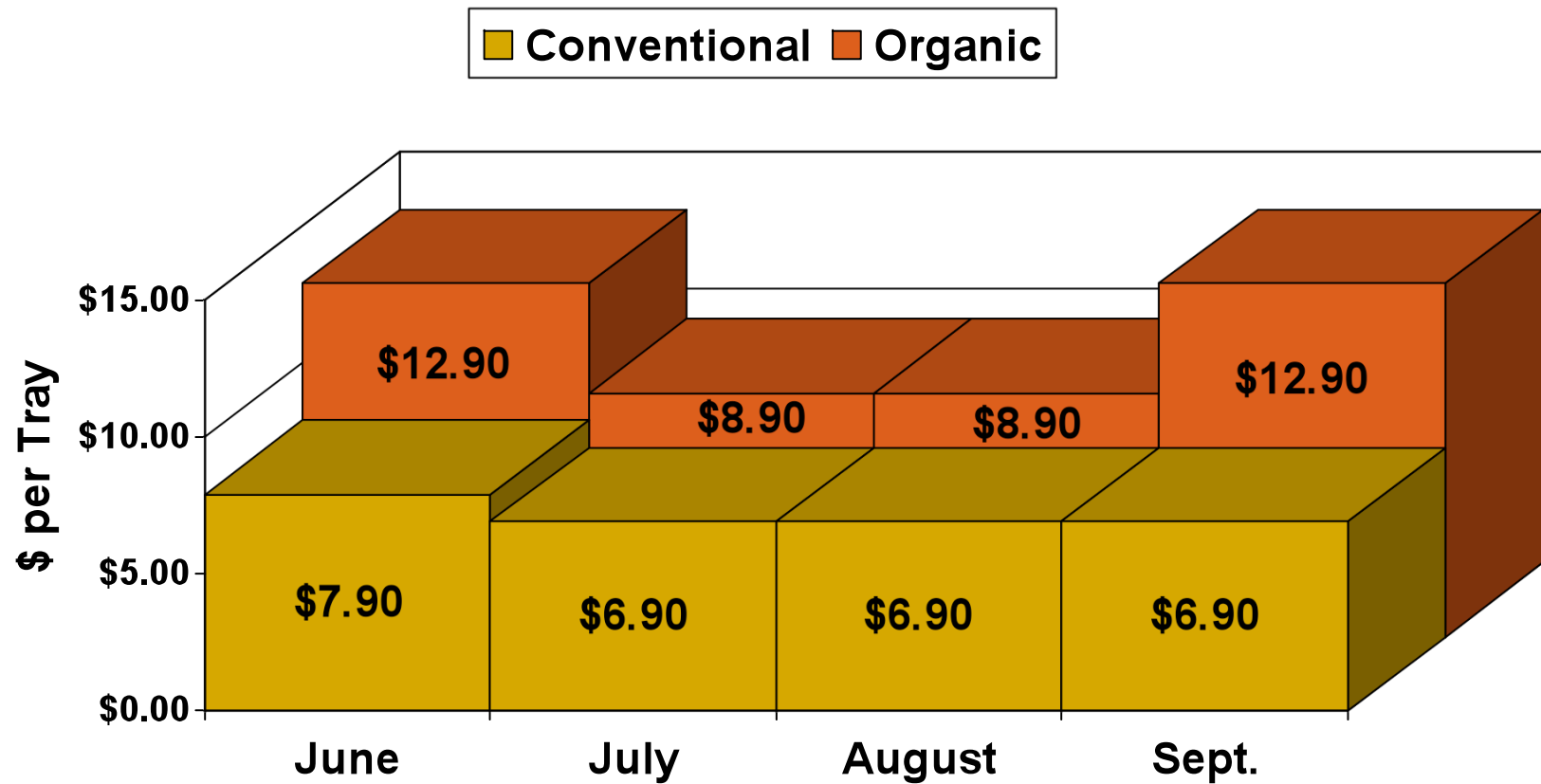
Source: Market News Service, USDA. Fruit and Vegetable Market News
www.marketnews.usda.gov

High strawberry F.O.B. prices Salinas–Watsonville 2007

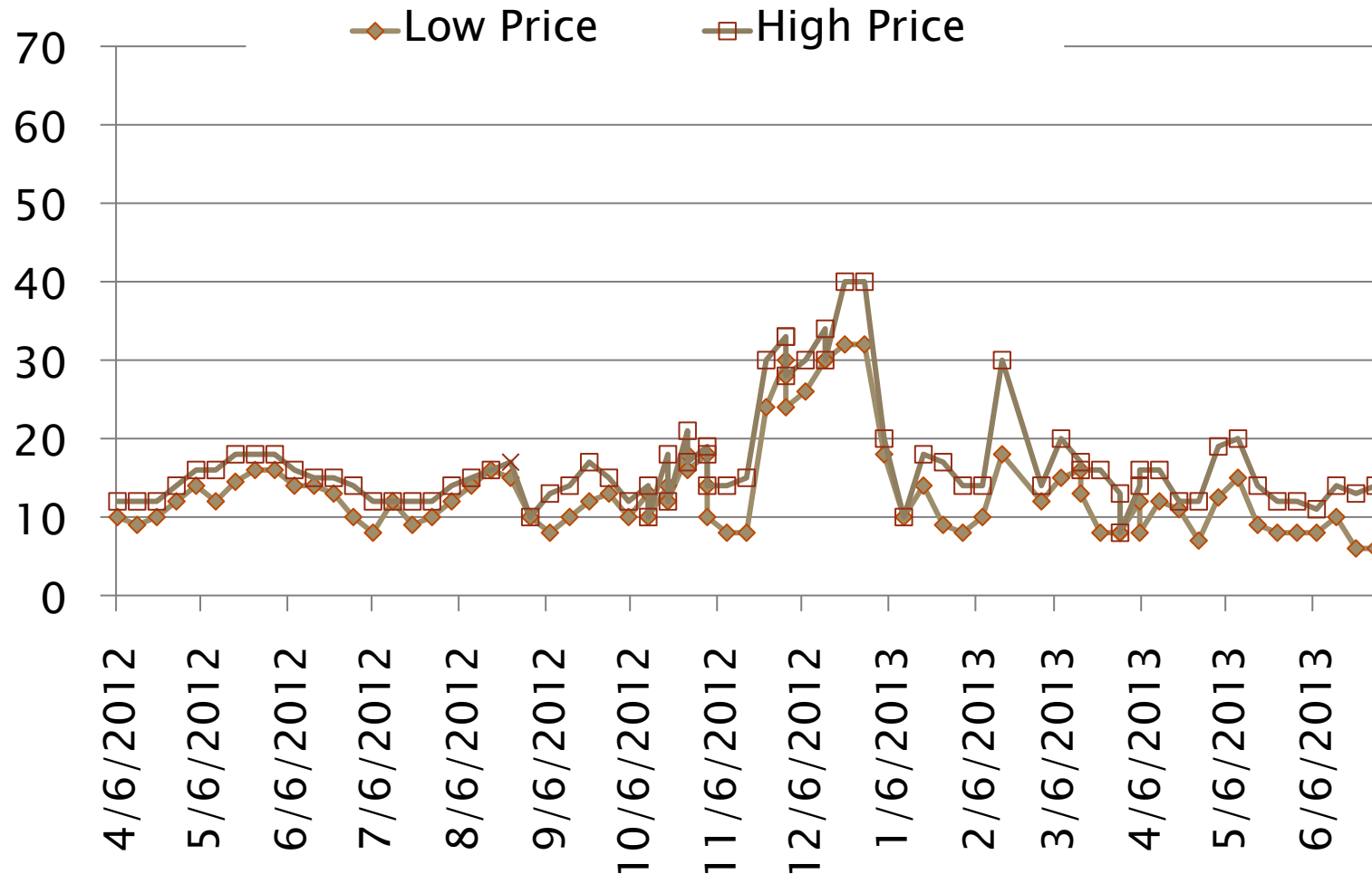


Source: Market News Service, USDA. Fruit and Vegetable Market News
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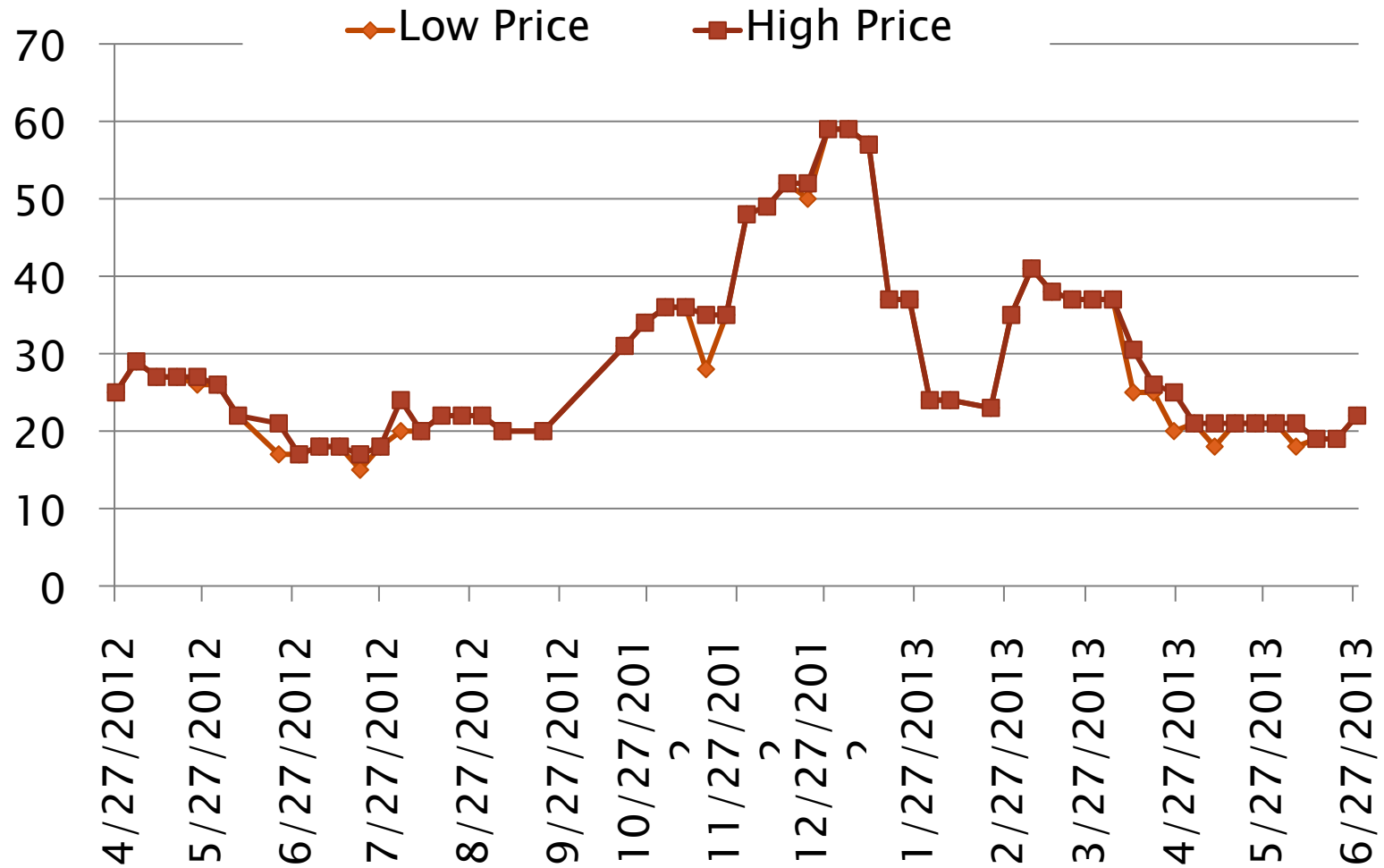
Low strawberry F.O.B. prices Salinas–Watsonville 2007



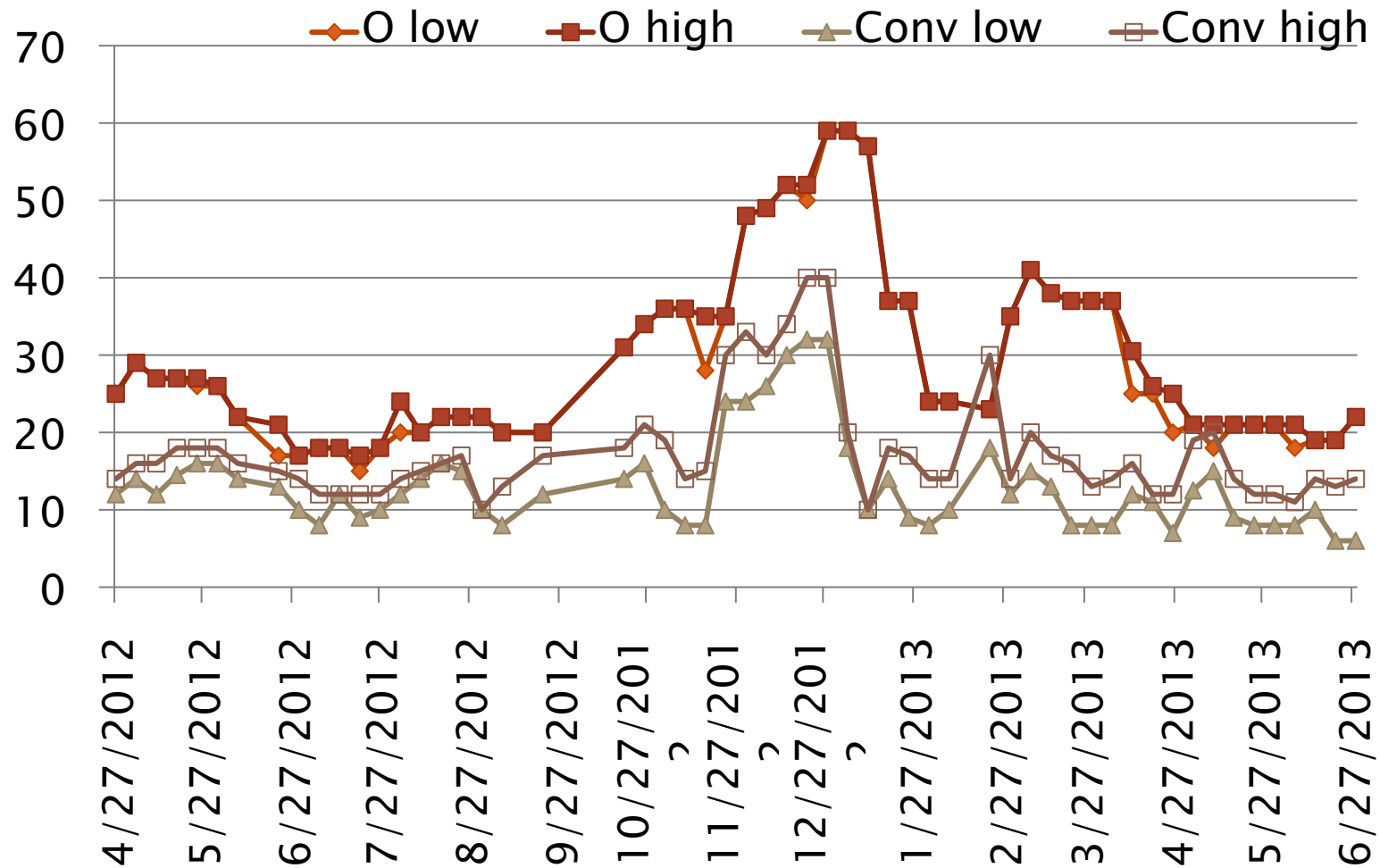
Conventional Strawberry Prices per Flat Boston Wholesale Market



Organic Strawberry Prices per Flat Boston Wholesale Market



Organic Strawberry Prices per Flat Boston Wholesale Market



Costs Per Acre to Produce Organic Strawberries

Santa Cruz and Monterey Counties

21,000 plants per acre

Rented land – 25 acres of organic strawberries

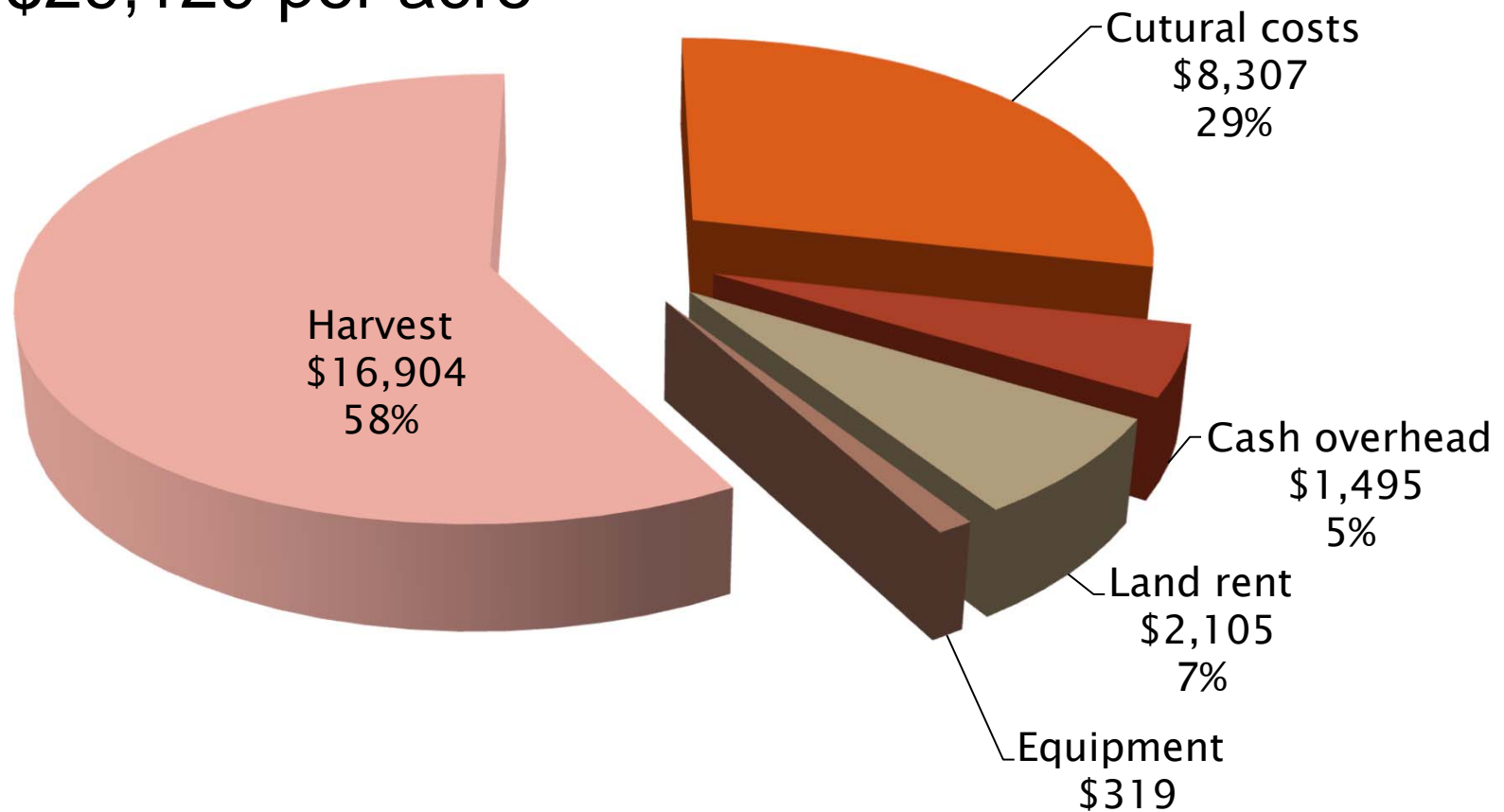
5 tons of compost plus foliar and drip fertilizers

Hand weeding

Expected yield of 3,750 trays (8 pounds) per acre

Total costs per acre to produce organic strawberries

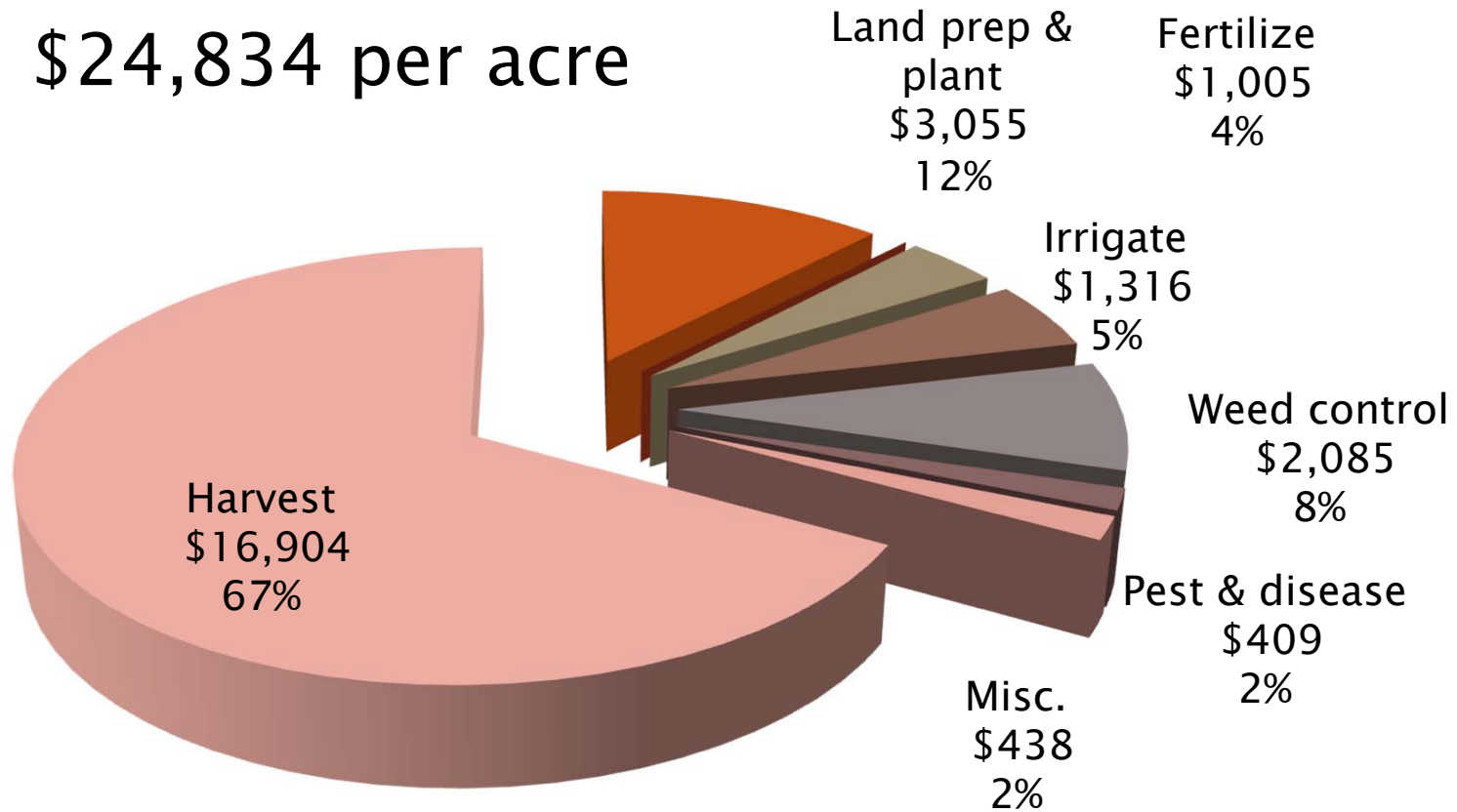
\$29,129 per acre



Source: Bolda, M., et al., 2006 Sample Costs to Produce Organic Strawberries, Central Coast. UCCE <http://coststudies.ucdavis.edu>

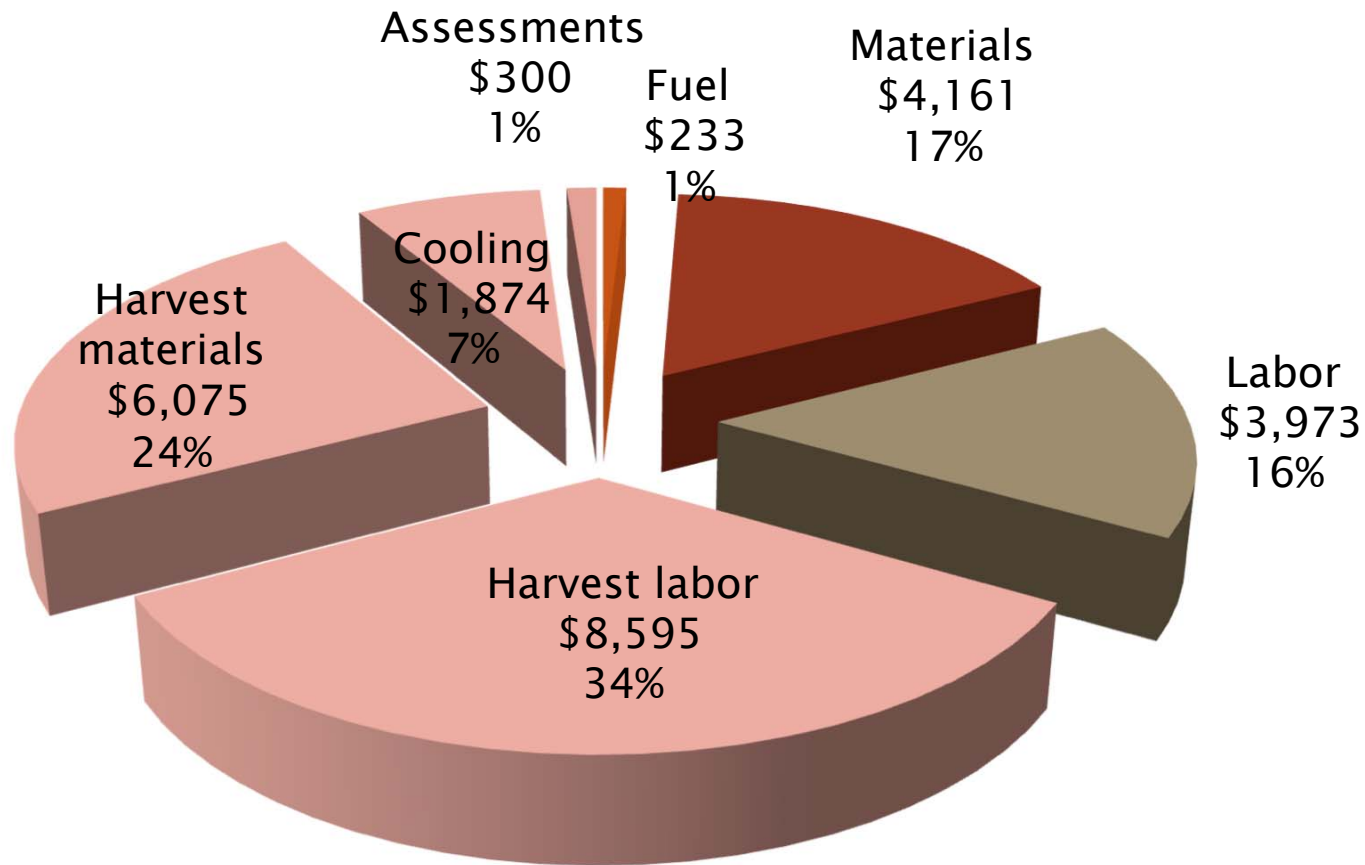
Operating costs by operation to produce organic strawberries

\$24,834 per acre



Source: Bolda, M., et al., 2006 Sample Costs to Produce Organic Strawberries, Central Coast. UCCE <http://coststudies.ucdavis.edu>

Operating costs per acre by input to produce organic strawberries



Source: Bolda, M., et al., 2006 Sample Costs to Produce Organic Strawberries, Central Coast. UCCE <http://coststudies.ucdavis.edu>

Harvest cost detail

Cost factor	Cost per Tray	Cost per Acre 3,750 trays
Tray + 8 clamshells	\$1.62	\$6,075
Labor	\$2.20	\$8,267
Haul to cooler	\$.10	\$378
Cooling	\$.50	\$1,875
Strawberry board	\$.04	\$150
Organic certification	\$.04	\$150
TOTAL	\$4.51	\$16,904

Moss Landing Research Trial

Strawberry/vegetable rotation

Treatment A – Continuous strawberries with broccoli residue applied from another field










Treatment B – Strawberries every other year and broccoli every other year with cover crop

Treatment C – Strawberries every third year

Treatment D – Strawberries every fourth year

Treatment E – Strawberries every fifth year

Treatments for Moss Landing Rotation Experiment

Treatment	Year 1	Year 2	Year 3	Year 4	Year 5
A					
B					
C					
D					
E					

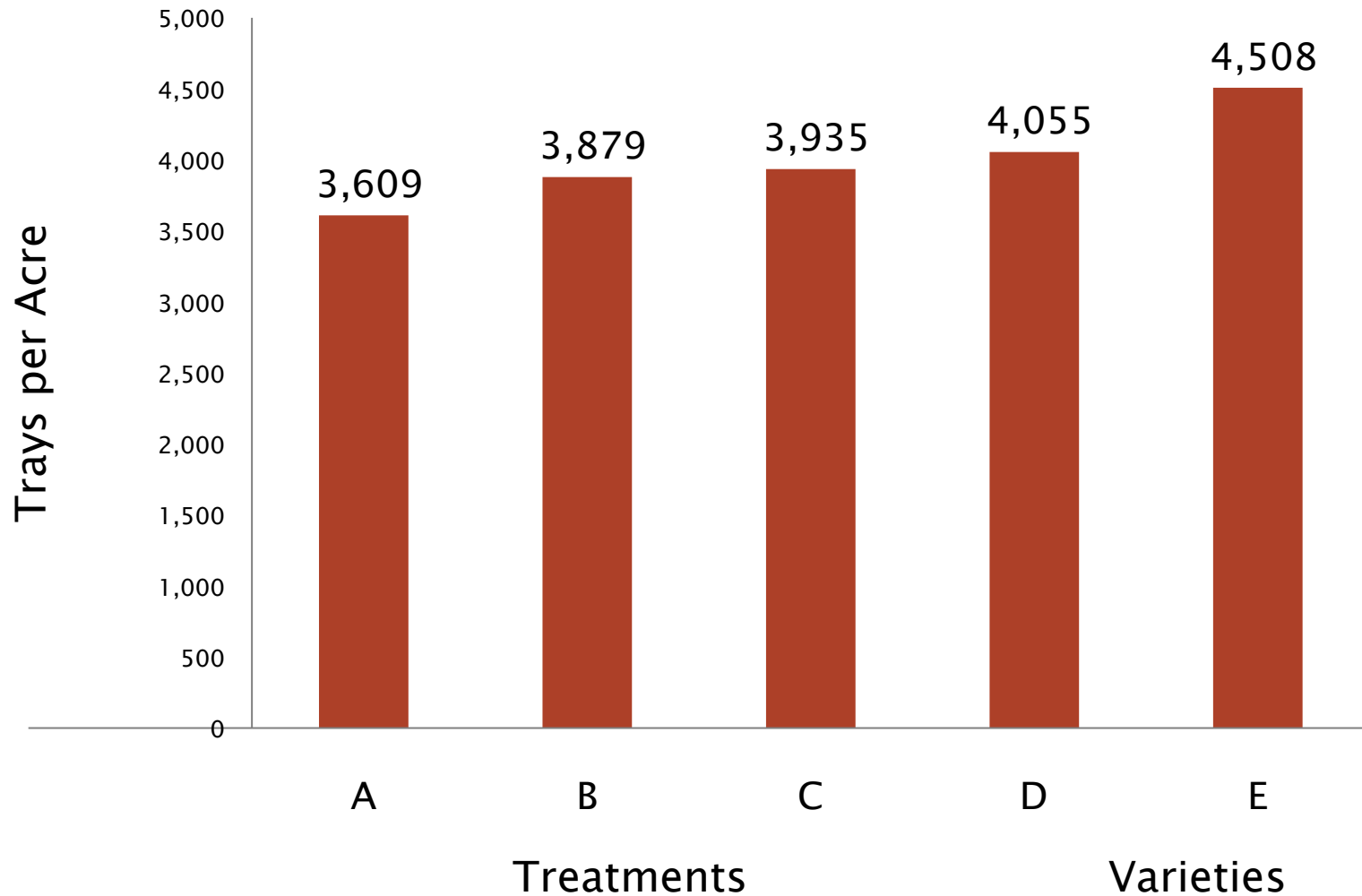
 Strawberry crop

 Cover crop followed by vegetable crop

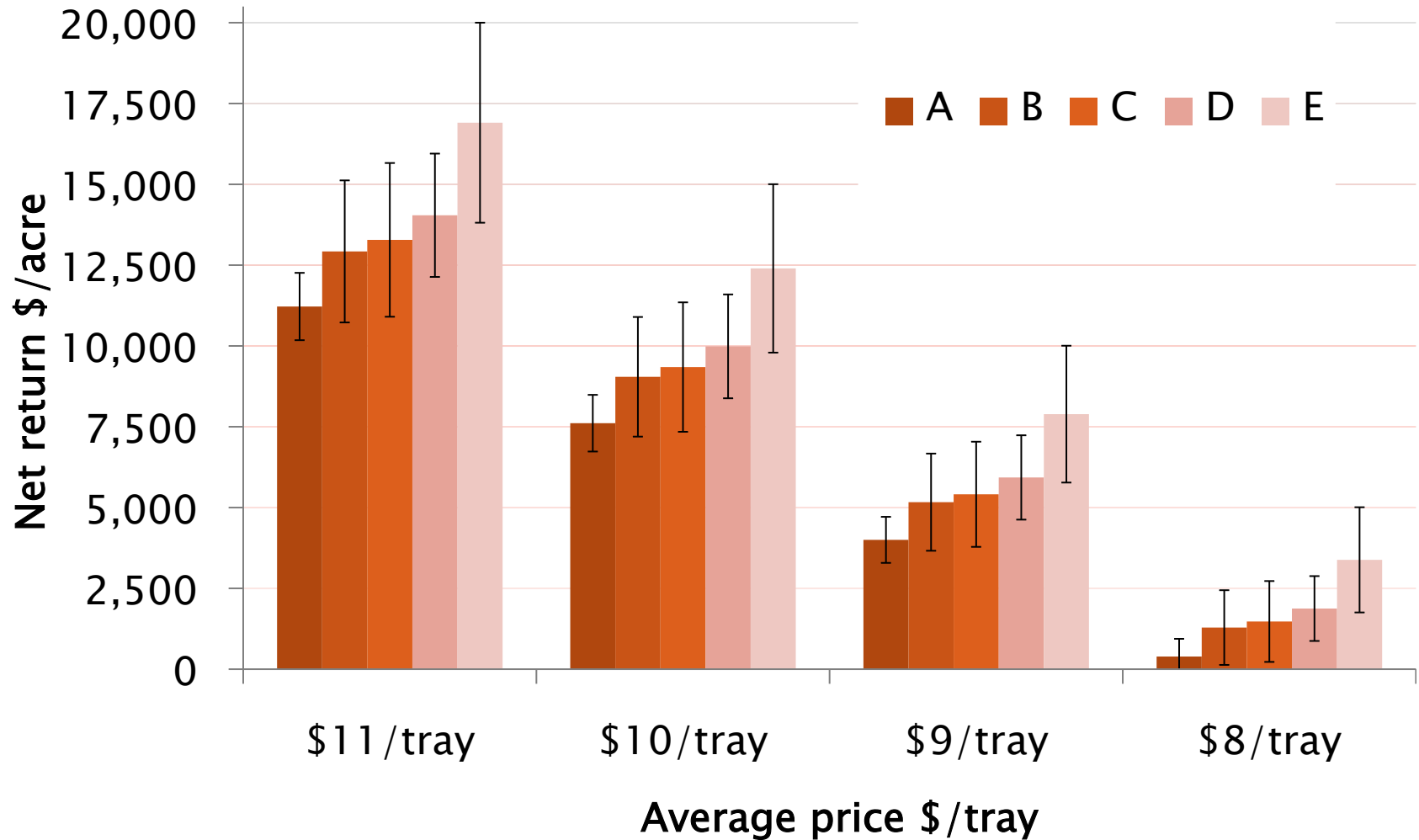
Cost to harvest and spread broccoli residue for Treatment A, continuous strawberries

Operation	Quantity/ Acre	Unit	Price / Unit	Cost/ Acre
Chop broccoli	19.27	tons	\$5.00	\$96
Haul broccoli residue	19.27	tons	4.20	81
Spread residue	19.27	tons	7.00	135
TOTAL COSTS				\$312

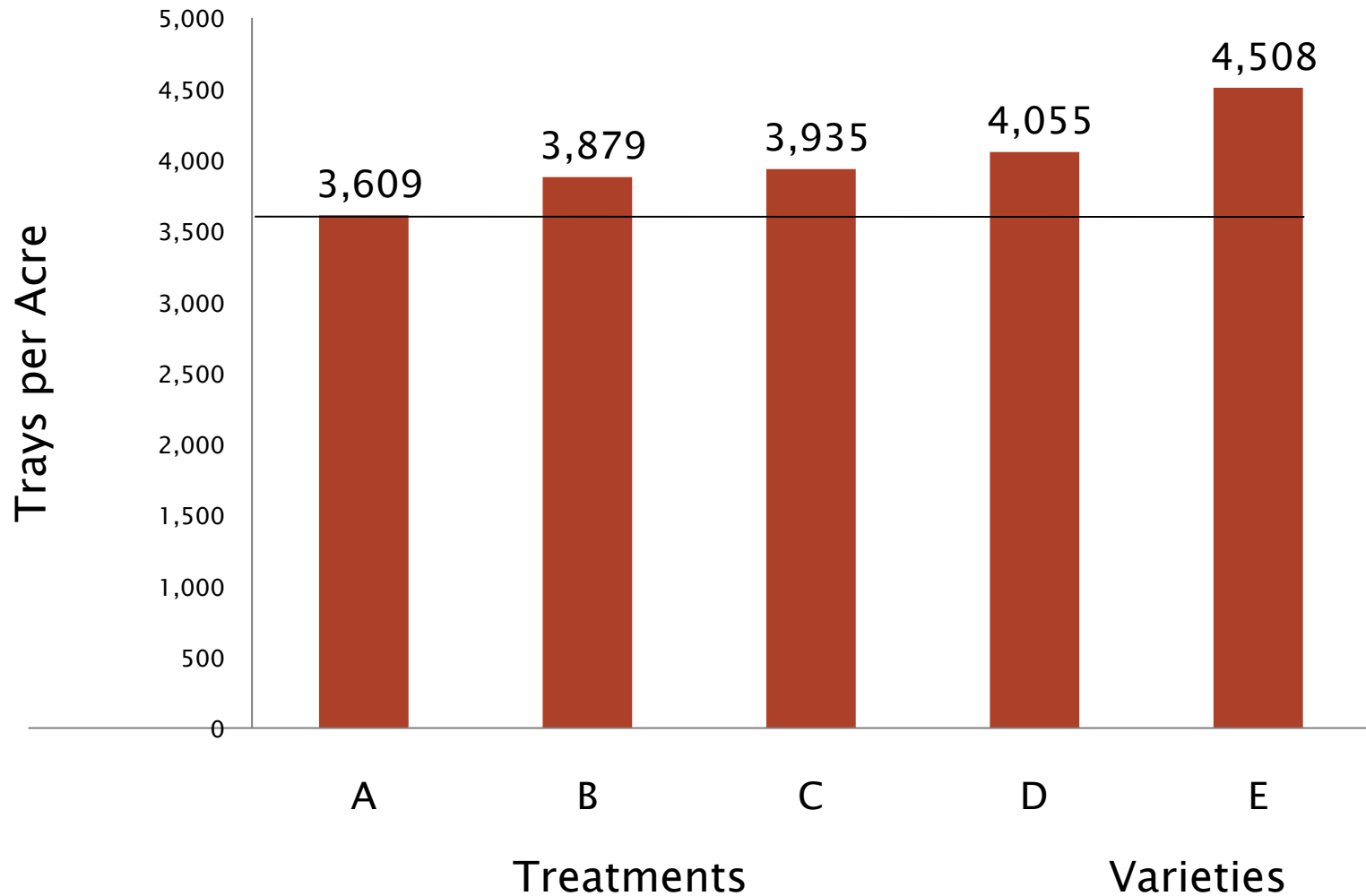
Marketable yields, trays per acre Moss Landing Year 5



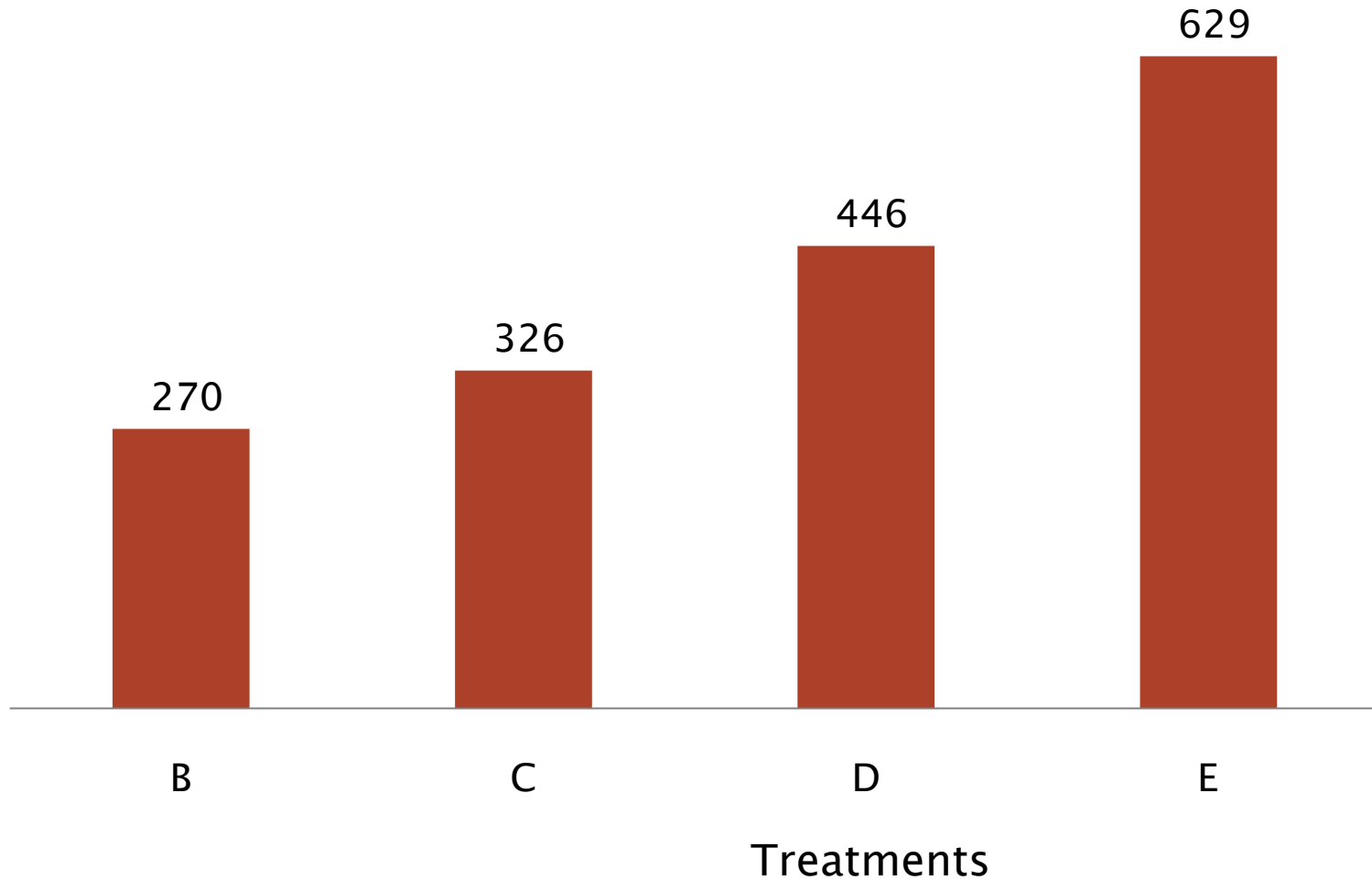
Estimated net returns for organic strawberries with varying rotation lengths – year 5 Moss Landing, CA 2006



Marketable yields, trays per acre Moss Landing Year 5

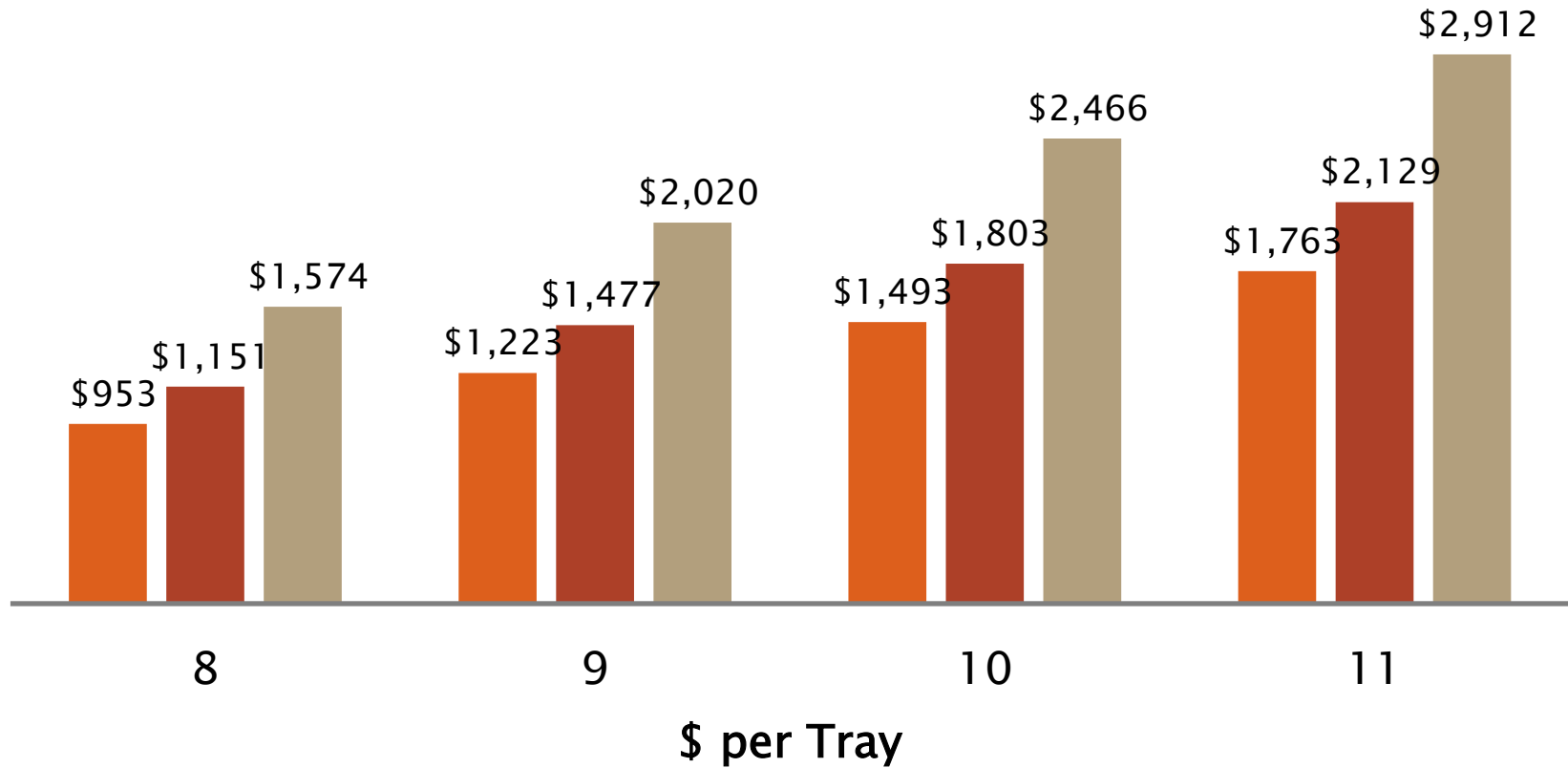


Increase in marketable yields compared to treatment A (continuous strawberries)
trays per acre Moss Landing Year 5



Increase in net returns per acre in year 5 by years between strawberry crops compared to continuous strawberries (

■ 1 year (B - A) ■ 2 years (C - A) ■ 3 years (D - A)







Alternative grower scenarios

Larger growers, 20 – 80 acres

-  Lease land
-  2 – 3 years in tomatoes then rotate with broccoli, lettuce, cauliflower, cabbage, or lettuce
-  Lease changes hands to vegetable grower

Small growers, 10 – 20 acres

-  Own land
-  1 – 2 acres of strawberries at a time
-  7 or 8 year rotation before coming back to strawberries at the same location
-  Same rotation crops as larger growers

Research implications

Larger growers, 20 – 80 acres

-  Important to be on top of expected price
-  Availability of high quality land to lease is key
-  Must know field history

Small growers, 10 – 20 acres

-  Production plan key
-  May be difficult to expand strawberry acreage without expanding entire operation
-  Need to have adequate business records to allow comparison of profitability of alternative crops and crop mix

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Visit our website for cost and return studies:

<http://coststudies.ucdavis.edu>