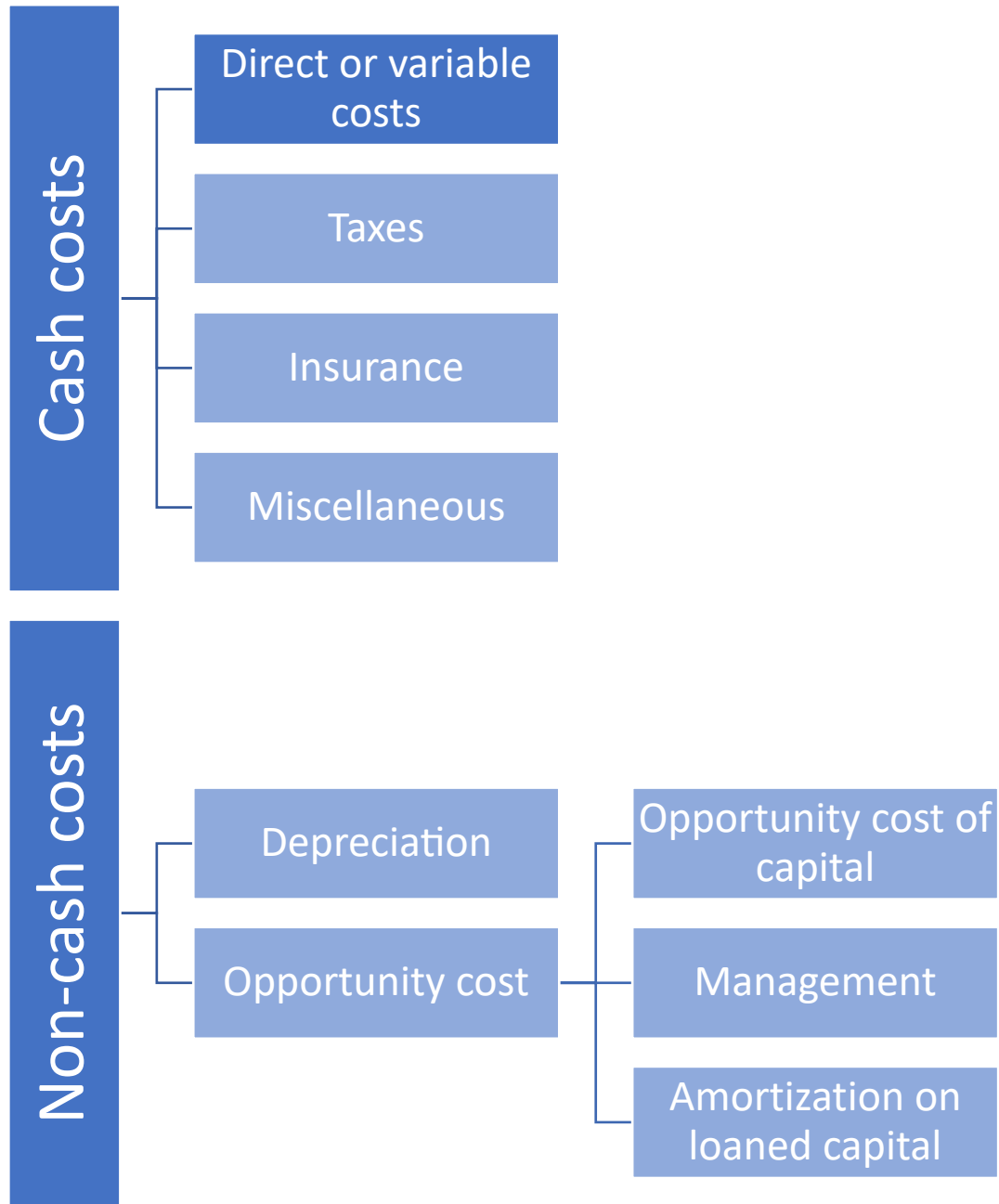


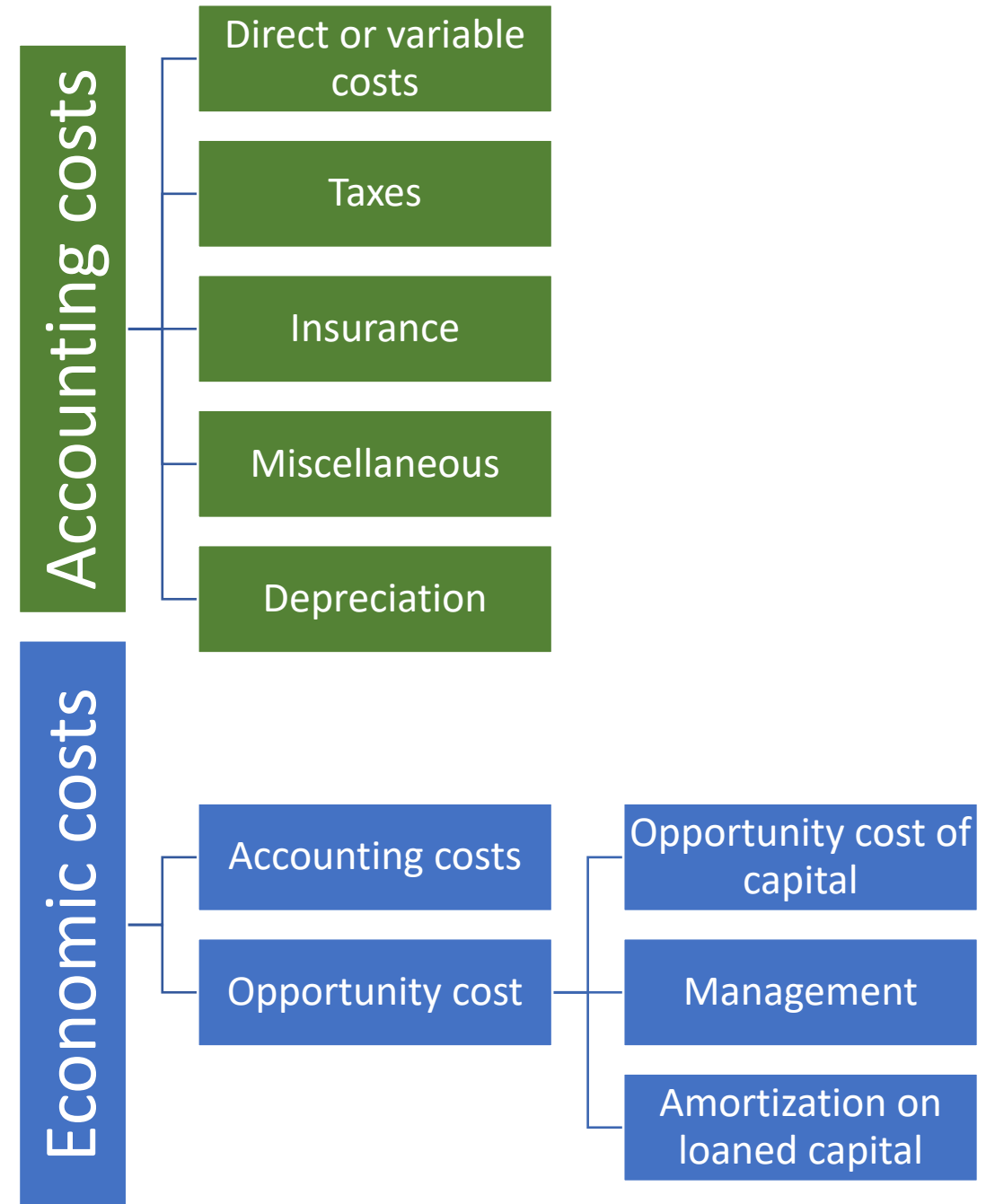
Sweet Cherry Cost of Production Updates

R. Karina Gallardo
Suzette P. Galinato

Production costs



Net returns = Total
returns - Total costs



Production costs

- Profits are not always > 0
 - Yield and price variability
- Short-term economic situation
 - Variable costs and cash costs
- Long-term economic situation
 - Cash and non-cash costs



Source: WSFC – Northwest Cherries

WSU Sweet Cherry Enterprise Budgets

- 2009
- 2015
- 2021
- Update 2022- 4 varieties:
 - Chelan
 - Skeena
 - Coral Champagne
 - Sweetheart

2021–2022 COST ESTIMATES OF ESTABLISHING, PRODUCING, AND PACKING CHELAN SWEET CHERRIES IN WASHINGTON STATE



Preface

The results presented in this WSU publication serve as a general guide for evaluating the feasibility of producing Chelan sweet cherries in Washington State in 2021–2022. This publication is not intended to be a definitive guide to production practices, but it is intended to be helpful in estimating the physical and financial requirements of comparable plantings. Specific budget assumptions were adopted for this study, but these assumptions may not represent the conditions in all production and marketing situations since production costs and returns vary across orchard operations, depending on the following factors:

- Capital, labor, and natural resources
- Crop yields
- Type and size of machinery, irrigation, and frost control systems
- Input prices
- Cultural practices
- Sweet cherry prices
- Orchard size
- Management skills

Cost estimations in the enterprise budget also vary depending on the budget's intended use. To avoid drawing unwarranted conclusions for any particular orchard, readers must closely examine the assumptions made in this guide and then adjust the costs, returns, or both as appropriate for their own orchard operation.

Chelan Sweet Cherry Production in Washington State

Washington State is the number one producer of sweet cherries in the United States. In 2009, the gross value of sweet cherries

was about \$394 million, ranking it eighth in terms of overall value of agricultural commodities produced in the state (WSDA 2021).

The top three sweet cherry varieties in Washington State, in terms of bearing acreage, are Bing, Sweetheart, and Chelan. The bearing acreage of Chelan is about 10% of the state total for sweet cherries in 2017, as compared to the shares of Bing and Sweetheart at 53% and 11%, respectively. The bearing acres of Chelan sweet cherries were 4,193 acres in 2017, distributed among four production regions: 36.4% in the Yakima Valley, 6.1% in Wenatchee, 27% in the Columbia Basin, and 30.5% in other areas (USDA NASS 2017). The free on board (FOB) price of Chelan in 2021 was \$2.71/lb. Between 2017 and 2021, the minimum and maximum prices of Sweetheart were \$2.27/lb and \$2.80/lb, respectively. The five-year average FOB price was \$2.62/lb, which is 3% lower than in 2021 (WSTFA 2021).

Study Objectives

The primary use of this report is in identifying inputs, costs, and yields considered typical of well-managed Chelan sweet cherry orchards.

This publication is designed to enable growers to estimate (1) the costs of equipment, materials, supplies, and labor required to establish and produce a Chelan sweet cherry orchard, including packing costs, and (2) the ranges of price and yield at which Chelan sweet cherry production would be a profitable enterprise.

Information Sources

The data used in this study were collected from information shared by a group of experienced Chelan cherry growers in Washington. Their production practices and input requirements from the baseline assumptions that were used to develop the enterprise budget. Additionally, the data represent what these owner-operators anticipate would occur over an orchard's life, if no unforeseen failures occur. Given that many factors affect



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How to find WSU Sweet Cherry Enterprise Budgets

← → ↻ google.com/search?q=WSU+Crop+enterprise+budgets&oq=WSU+crop+enterprise+budgets&aqs=chrome.0.69i59j69i60.913

Apps MyDashboard Microsoft Office H... Blackboard Learn My Meetings - Zoom Cengage Contact Support Kennydal

Google WSU Crop enterprise budgets

All News Shopping Images Maps More Settings Tools

About 109,000 results (0.50 seconds)

Crop Enterprise Budgets | Washington State University - WSU ...
[ses.wsu.edu > enterprise_budgets](https://ses.wsu.edu/enterprise_budgets) ▼

The purposes of these **budgets** are to estimate the costs and returns from producing these **crops** for research and policy purposes and to provide producers and their credit providers with a tool to use in **enterprise** selection and financing.

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Washington **Enterprise Budgets** for **Crop** Commodities ... Alfalfa, 1996 Alfalfa Seed **Enterprise Budget**, Walla Walla County, Washington (EB1375), Gary, Willett ...

http://www.ses.wsu.edu/enterprise_budgets

Washington State University

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Crop Enterprise Budgets

Washington State University has a history of developing and publishing enterprise budgets for many of the major crops grown throughout Washington State. The purposes of these budgets are to estimate the costs and returns from producing these crops for research and policy purposes and to provide producers and their credit providers with a tool to use in enterprise selection and financing.

Washington Enterprise Budgets for Crop Commodities

Search:

Commodity	Title	Author	Date	Link
Alfalfa	2012 Irrigated Alfalfa Hay Budget Under Center Pivot in the Columbia Basin (FS133E)	Norberg, Neibergs	2014	pdf excel
Alfalfa	Organic Alfalfa Management Guide (Feb 2009) (EB2039E)	Fuerst, Koenig, Kugler, Painter, Stannard, Goldberger	2009	pdf
Alfalfa	Spreadsheet for Dryland Organic Alfalfa Production	Painter	2009	pdf excel
Alfalfa	2009 Costs of Producing Alfalfa Hay	Hinman,	2009	pdf

Financial Analysis & Record Keeping

Careful record keeping and some basic financial analysis can take some of the guesswork and stress out of being a business manager:

- Motivation – Why get excited about financial analysis?
- Analyzing your farm's financial performance – Cash flow statements
- Investment analysis – Different evaluation methods
- Amortization of loans – Making them cash flow

[More...](#)

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Crop Enterprise Budgets

Washington State University has a history of developing and publishing enterprise budgets for many of the major crops grown throughout Washington State. The purposes of these budgets are to estimate the costs and returns from producing these crops for research and policy purposes and to provide producers and their credit providers with a tool to use in enterprise selection and financing.

Washington Enterprise Budgets for Crop Commodities

Search: cherries

Commodity	Title	Author	Date	Link
Cherries	2015 Cost Estimates of Establishing, Producing, and Packing Sweetheart Sweet Cherries in Washington State (TB34)	Galinato, Gallardo	2016	pdf excel
Cherries	2015 Cost Estimates of Establishing, Producing, and Packing Bing Sweet Cherries in Washington (TB22)	Galinato and Gallardo	2016	pdf excel
Cherries	2009 Cost Estimates of Establishing and Producing Sweet Cherries in Washington (FS022E)	Galinato, Gallardo, Taylor	2010	pdf excel
Cherries	Cost of Establishing and Producing Sweet Cherries in Central Washington in 2007 (EB2026E)	Hinman, Hoheisel	2007	pdf
Cherries	Cost of Establishing and Producing Sweet Cherries in Central Washington in 1998 (EB1877E)	Hinman, Watson	1998	pdf

WSU enterprise budgets – PDF & Excel

2021–2022 COST ESTIMATES OF ESTABLISHING, PRODUCING, AND PACKING SWEETHEART SWEET CHERRIES IN WASHINGTON STATE



Preface

The results presented in this publication serve as a general guide for evaluating the feasibility of producing Sweetheart sweet cherries in Washington State in 2021–2022. This publication is not intended to be a definitive guide to production practices, but it is intended to be helpful in estimating the physical and financial requirements of comparable plantings. Specific budget assumptions were adopted for this study, but these assumptions may not represent the conditions in all production and marketing situations since production costs and returns vary across orchard operations, depending on the following factors:

- Capital, labor, and natural resources
- Crop yields
- Type and size of machinery, irrigation, and frost control systems
- Input prices
- Cultural practices
- Sweet cherry prices
- Orchard size
- Management skills

Cost estimations in the enterprise budget also vary depending on the budget's intended use. To avoid drawing unwarranted conclusions for any particular orchard, readers must closely examine the assumptions made in this guide and then adjust the costs, returns, or both as appropriate for their own orchard operation.

Sweetheart Sweet Cherry Production in Washington State

Washington State is the number one producer of sweet cherries in the United States. In 2019, the gross value of sweet cherries

was about \$394 million, making it eighth in terms of overall value of agricultural commodities produced in the state (WSDA 2021).

Sweetheart is second to Bing in terms of acreage. In 2017, Sweetheart's share in the total bearing acreage of sweet cherries in Washington State was 11%, while Bing's share was 53%. The bearing acres of Sweetheart were 4,462 acres in 2017, distributed between two major production regions: 40% in the Columbia Basin and 60% in the Wenatchee Valley (USDA, NASS 2017). The free on board (FOB) price of Sweetheart in 2021 was \$1.96/lb. Between 2017 and 2021, the minimum and maximum prices of Sweetheart were \$1.49/lb and \$2.81/lb, respectively. The five-year average FOB price is \$2.03/lb, which is 2% higher than in 2021 (WSTFA 2021).

Study Objectives

The primary use of this report is in identifying inputs, costs, and yields considered typical of well-managed Sweetheart sweet cherry orchards.

This publication is designed to enable growers to estimate (1) the costs of equipment, materials, supplies, and labor required to establish and produce Sweetheart sweet cherries, including packing costs, and (2) the ranges of price and yield at which Sweetheart sweet cherry production would be a profitable enterprise.

Information Sources

The data used in this study were collected from information shared by a group of experienced Sweetheart cherry growers in Washington. Their production practices and input requirements form the baseline assumptions that were used to develop the enterprise budget. Additionally, the data represent what these owner-operators anticipate would occur over an orchard's life, if no unforeseen failures occur. Given that many factors affect production costs, packout, and returns, individual growers can

Table 2. Cost and Returns per Acre of Establishing, Producing and Packing Sweetheart Sweet Cherries on a 12-Acre Block

	Establishment Years					Full Production ^A
	Year 1	Year 2	Year 3	Year 4	Year 5	
Estimated Net Production, Fresh (lb/acre) ^B			1,600.00	8,000.00	14,400.00	19,200.00
FOB Price, Fresh (\$/lb) ^C			2.05	2.05	2.05	2.05
Estimated Net Production, Cull (lb/acre)			400.00	2,000.00	3,600.00	4,800.00
FOB Price, Cull (\$/lb)			0.04	0.04	0.04	0.04
Total Returns (\$/acre)			3,296.00	16,480.00	29,664.00	39,552.00
Variable Costs (\$/acre):						
Establishment						
Soil Preparation			2,439.52			
Trees (including labor)			3,900.00			
Orchard Activities						
Pruning & Training ^D	108.80	456.96	609.28	783.36	1,218.56	870.40
Green Fruit Thinning ^D	0.00	0.00	0.00	0.00	435.20	435.20
Irrigation Labor ^E	115.05	161.07	161.07	207.09	207.09	207.09
Chemicals ^{E,F}	629.57	1,094.94	1,616.26	1,770.07	1,842.59	1,842.59
Monitoring & Testing ^G	66.00	66.00	206.00	206.00	206.00	228.00
Fertilizer ^{E,F}	84.89	170.00	254.89	284.26	284.26	284.26
Frost Protection (Labor) ^E			17.26	17.26	17.26	17.26
Beehives			114.00	114.00	114.00	114.00
General Farm Labor ^H	225.00	225.00	225.00	225.00	225.00	225.00
Irrigation Water & Electric Charge	275.00	275.00	275.00	275.00	275.00	275.00
Drying Cherries ^I			350.00	350.00	350.00	350.00
Harvest Activities^J						
Picking Labor			500.00	2,500.00	4,500.00	6,000.00
Other Labor (checkers, tractor drivers)			100.00	500.00	900.00	1,200.00
Hauling			30.00	150.00	270.00	360.00
Warehouse Packing Charges^K						
			1,200.00	6,000.00	10,800.00	14,400.00
Maintenance and Repairs						
Maintenance & Repair	265.00	265.00	300.00	300.00	300.00	300.00
Fuel & Lube	240.00	270.00	280.00	320.00	360.00	360.00
Other Variable Costs						
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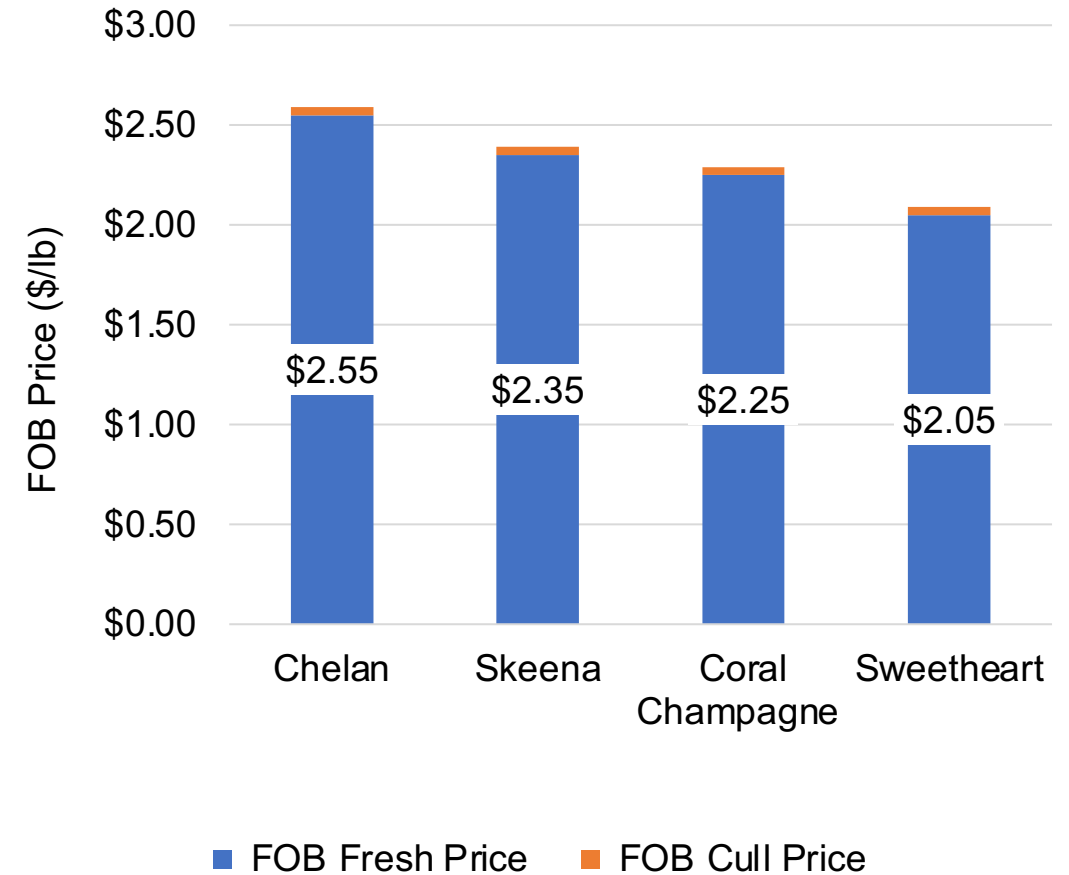
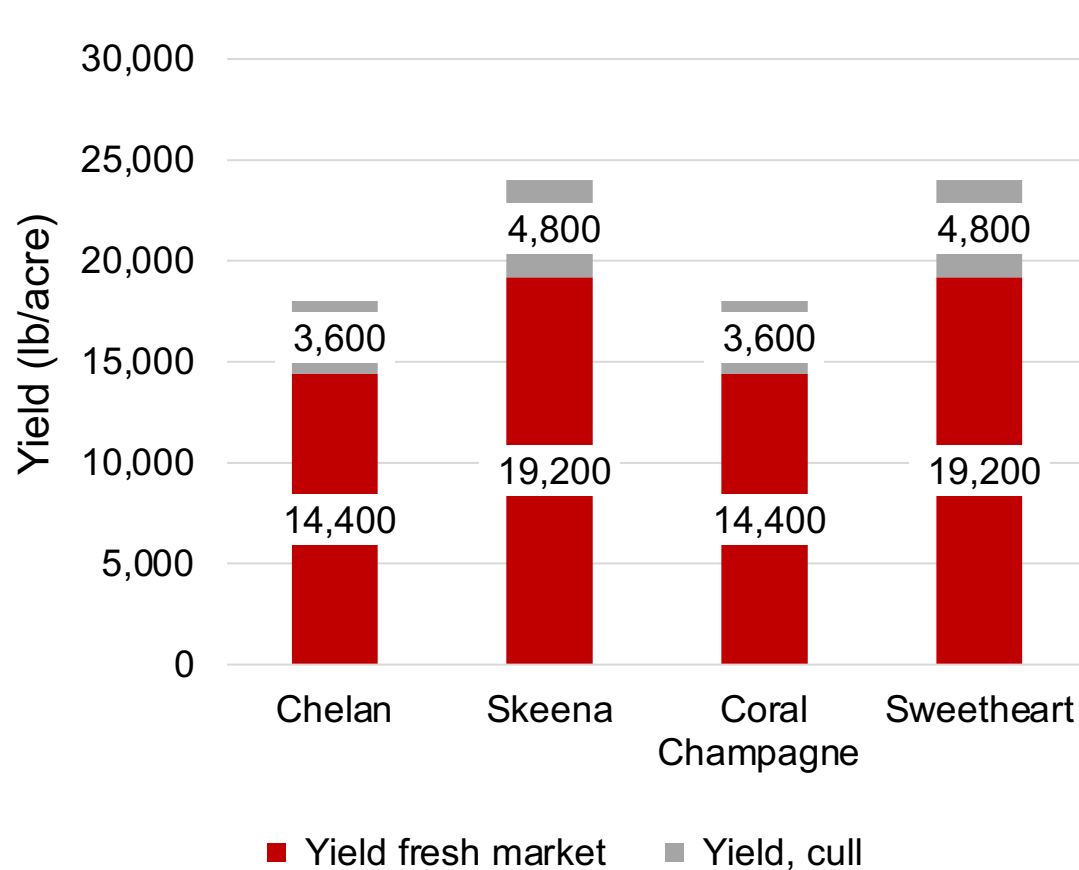


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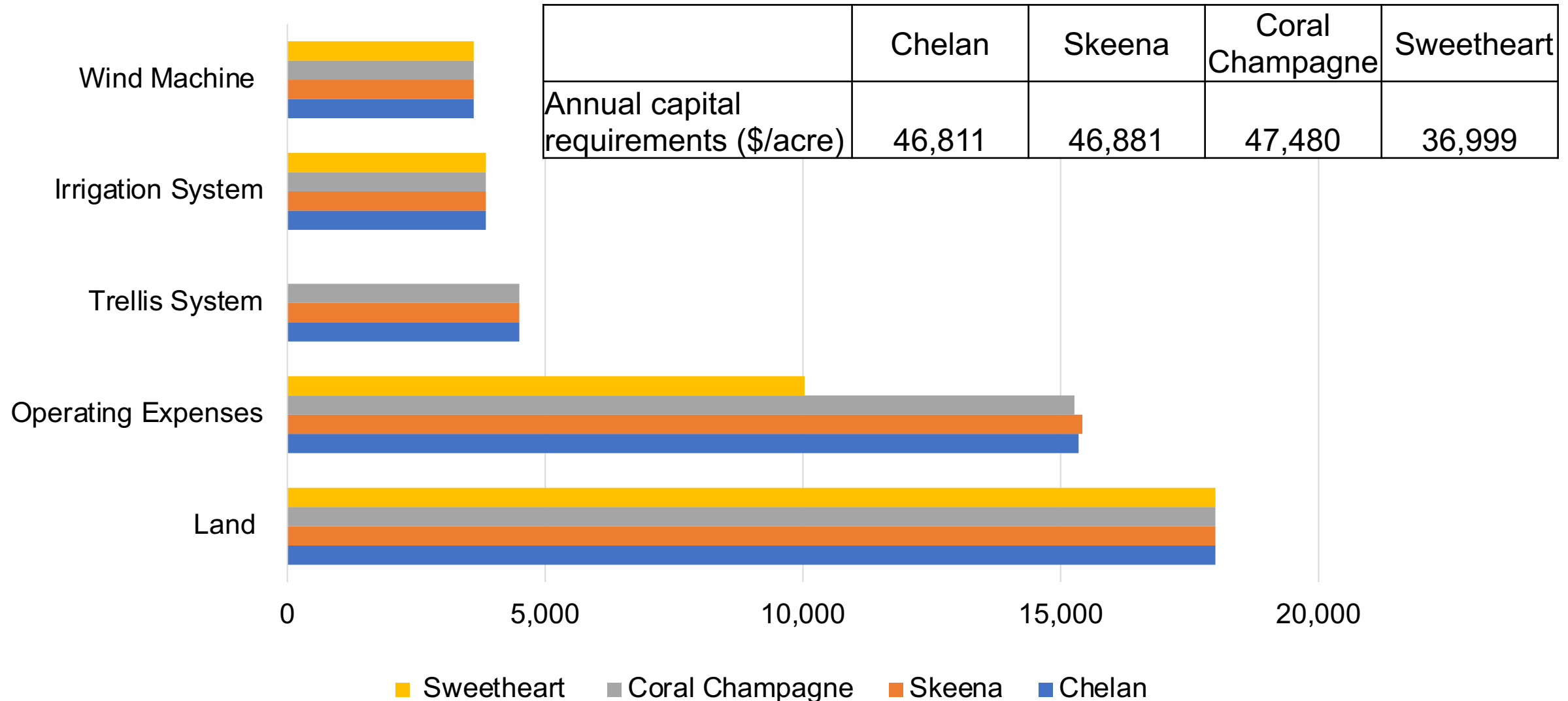
WSU budgets are based on assumptions and data collected from a group of experienced growers

	Chelan	Skeena	Coral Champagne	Sweetheart
Farm size (acre)	300	300	300	300
Productive block size (acre)	12	12	8	12
Gross yield full production (lb/acre)	18,000	24,000	18,000	24,000
Packout (%)	80	80	80	80
FOB price (\$/lb)	2.55	2.35	2.25	2.05
In-row spacing (feet)	6	6	6	10
Bet. row spacing (feet)	12	12	12	16
Root stock	G12	G12	G12	Mazzard
Life of planting (years)	25	25	25	25
Tree density (trees/acre)	605	605	605	272
Trellis system	Vertical trellis			No trellis
Block architecture	Central leader, three dimensional			

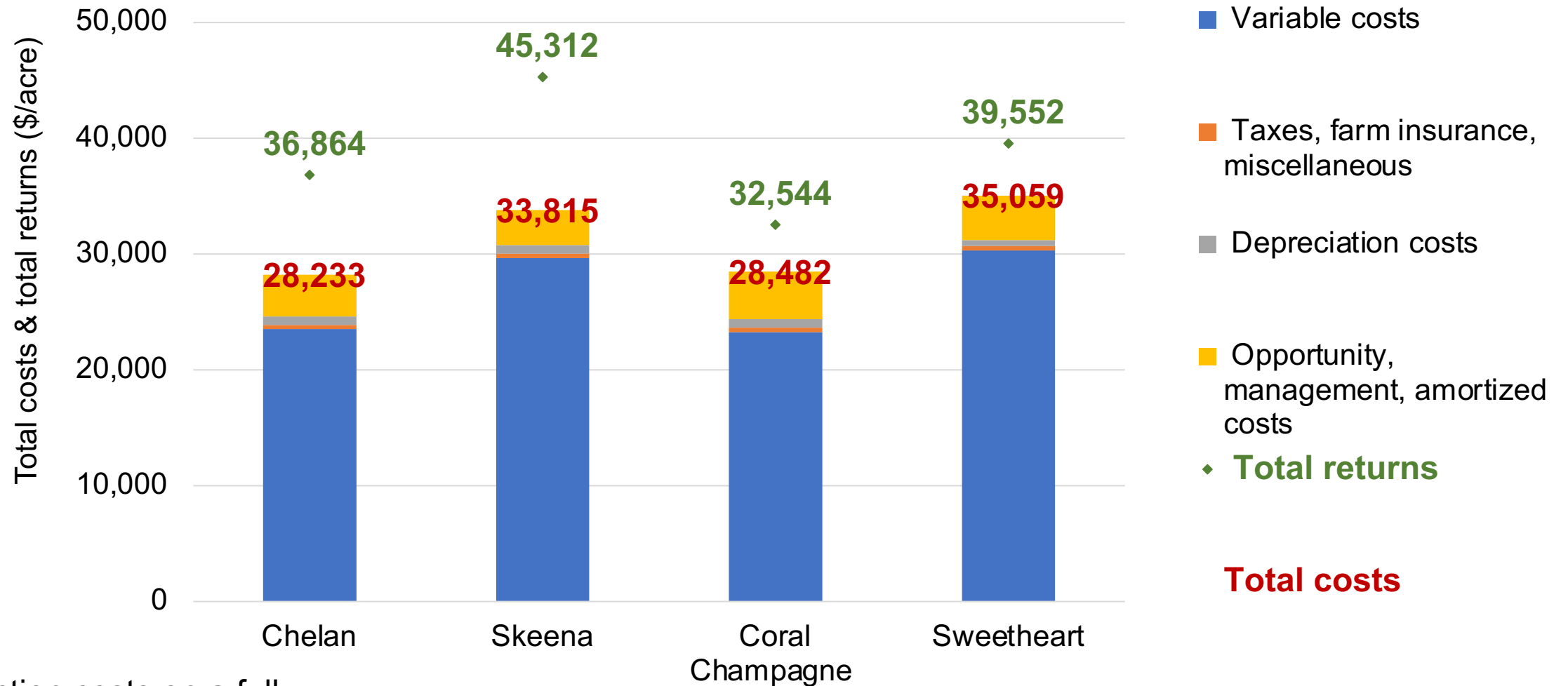
2022 sweet cherry yield and FOB prices during full production



Capital requirements, 2022

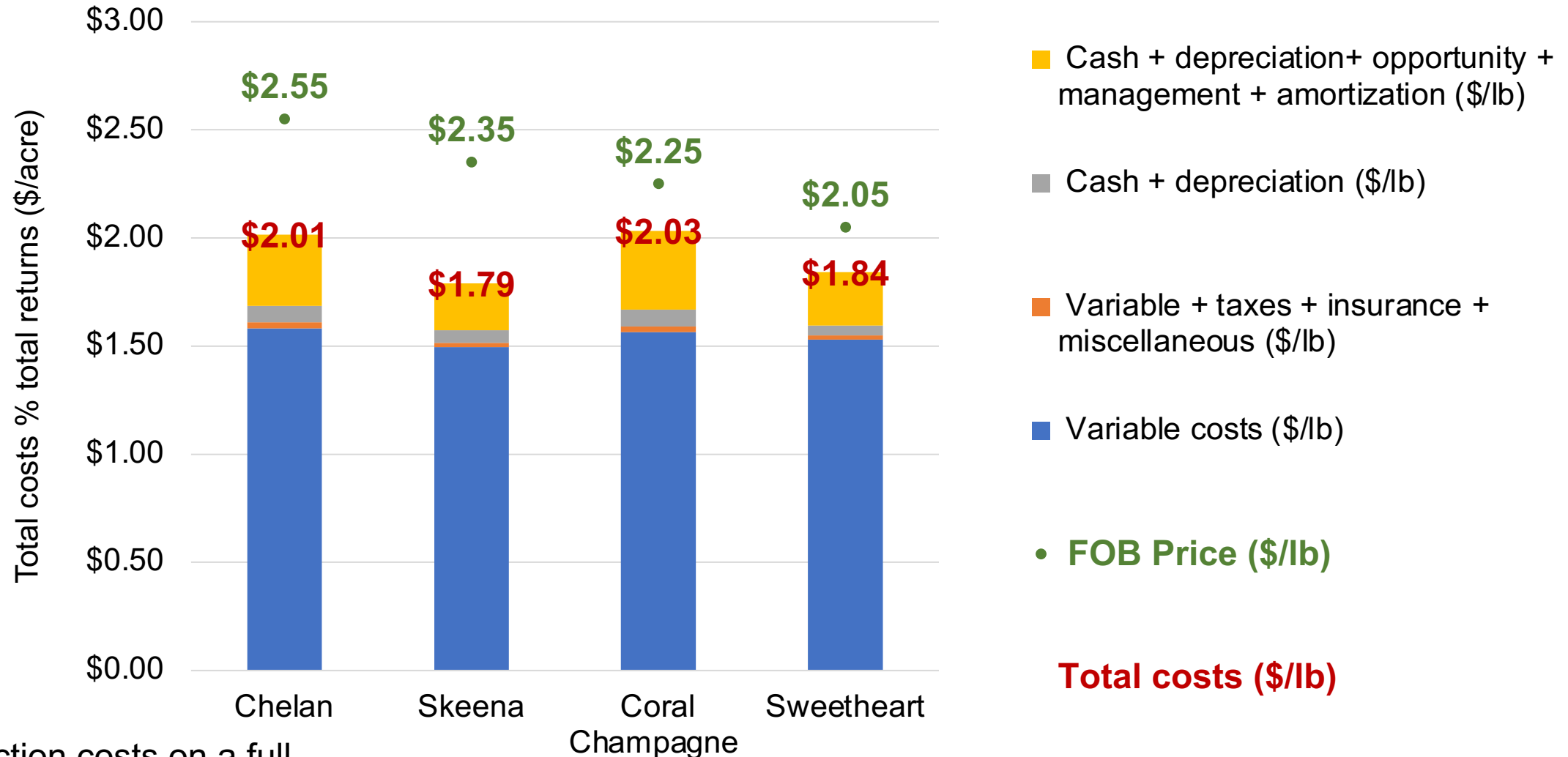


Total returns versus total costs (\$/acre)



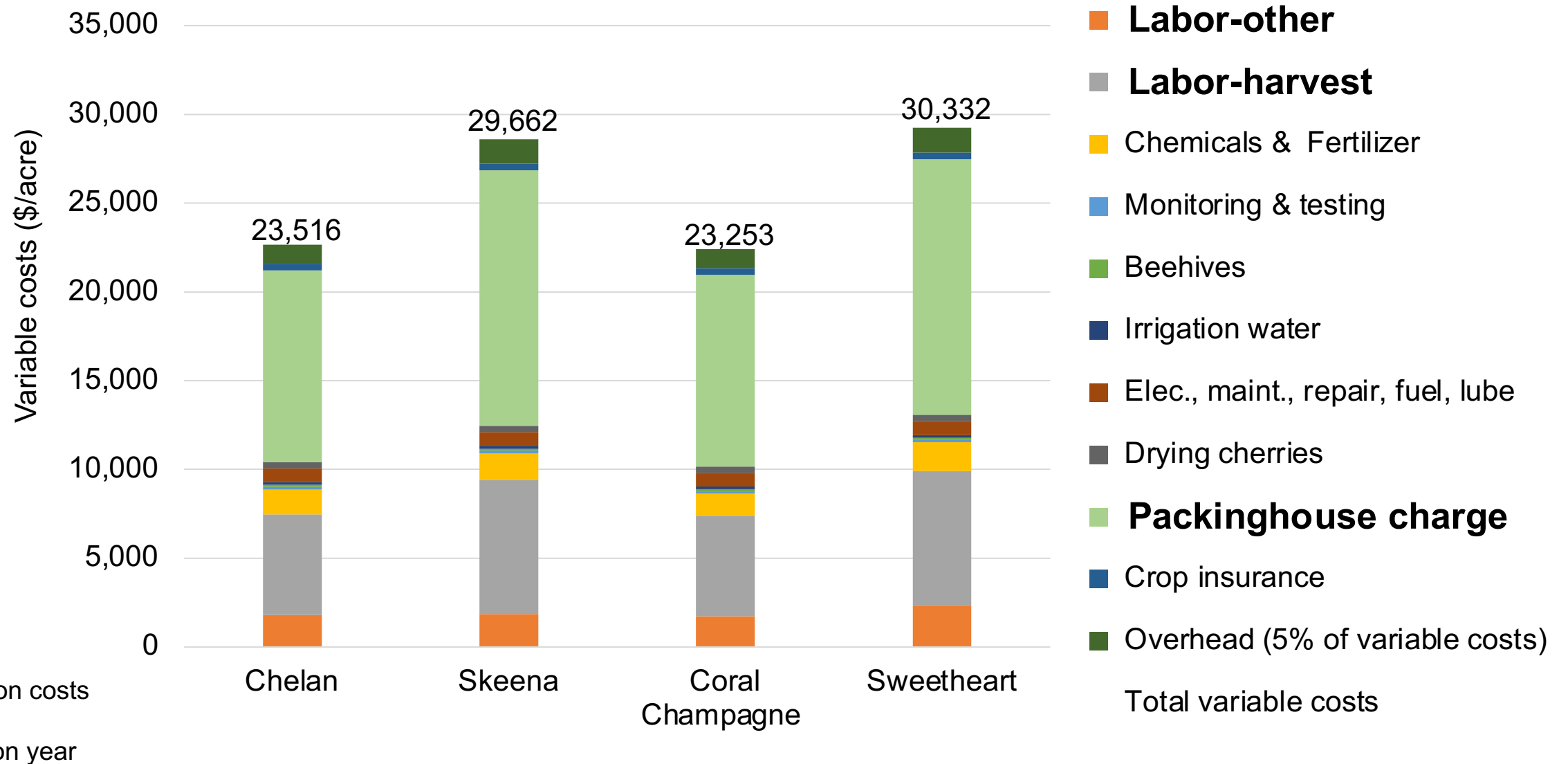
Production costs on a full production year

Total returns versus total costs (\$/lb)

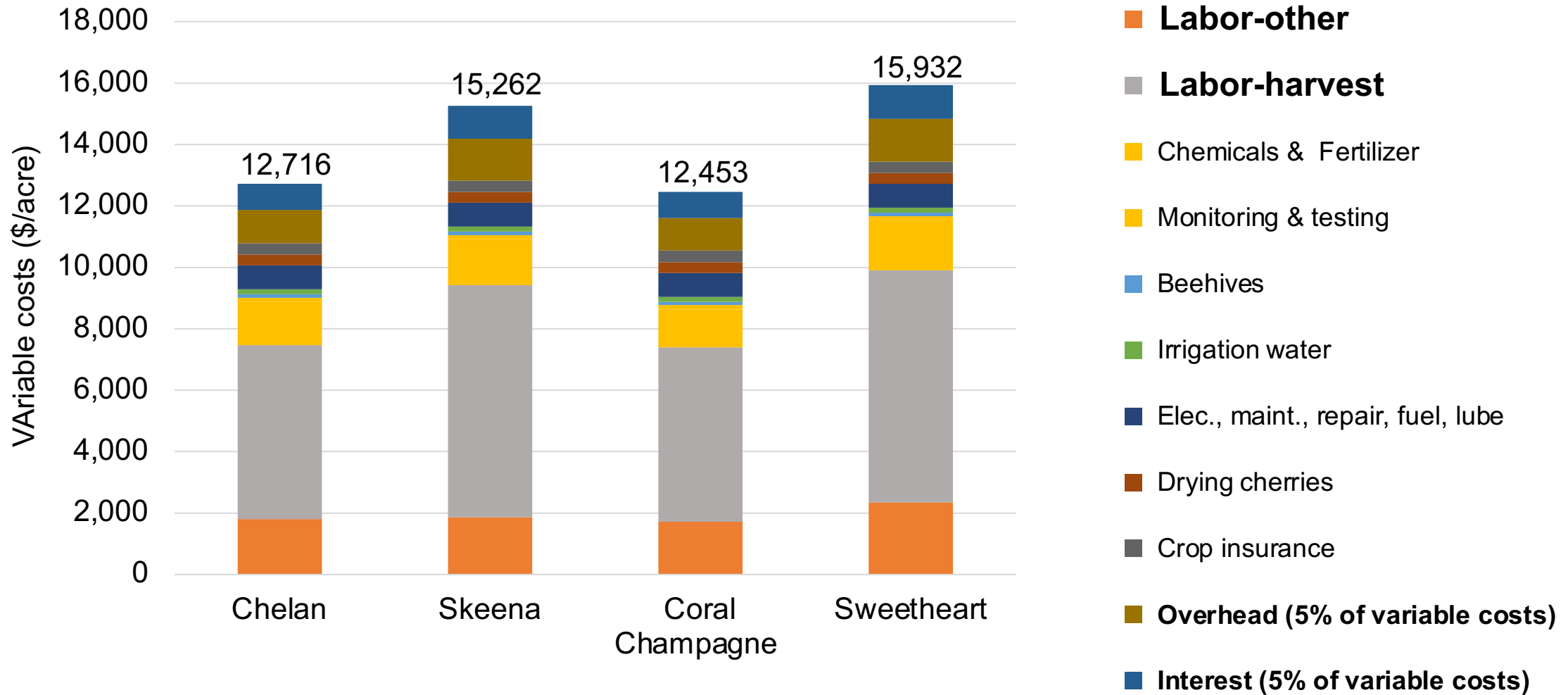


Production costs on a full production year

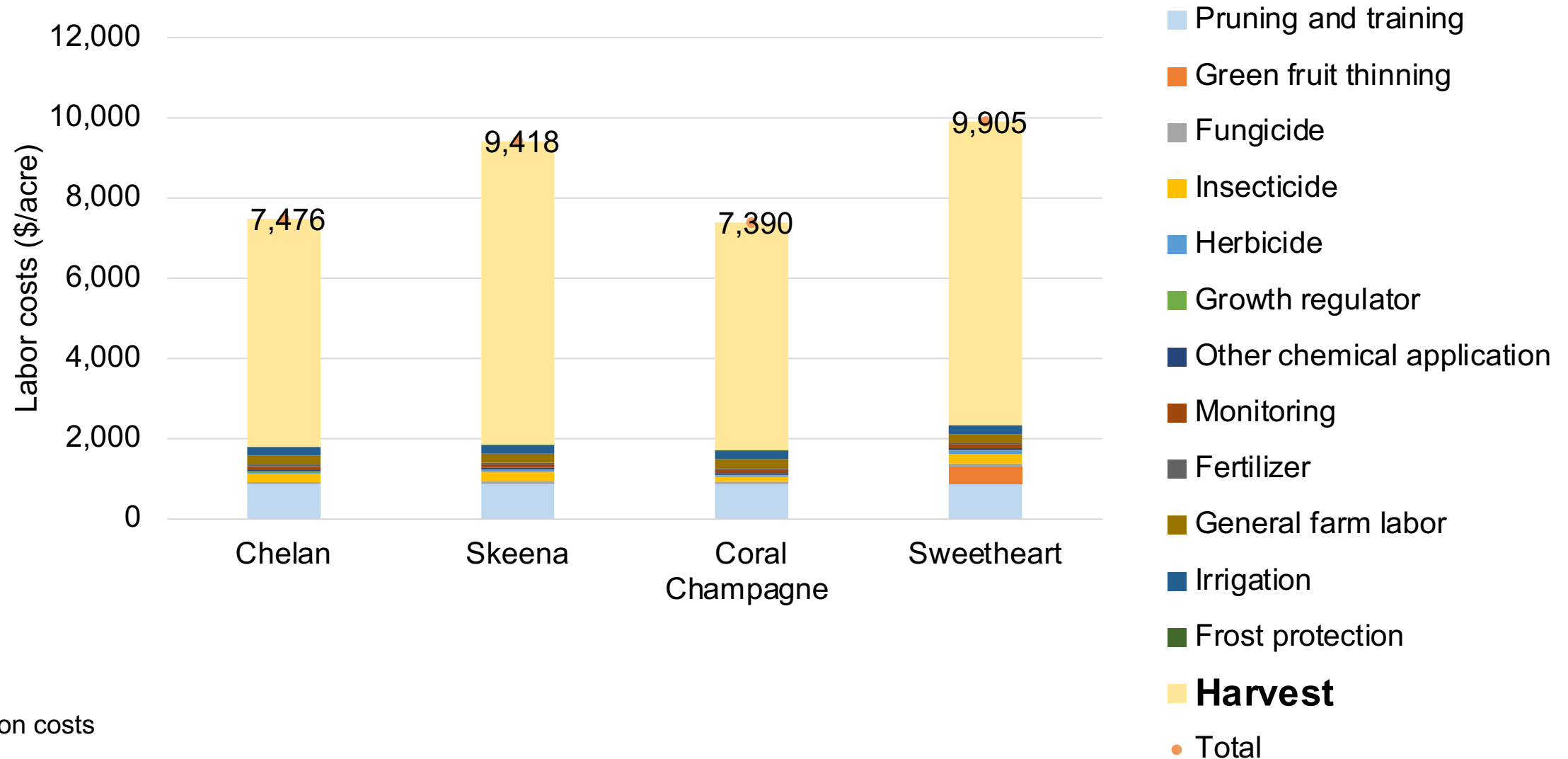
Variable costs: How do labor costs compare to all variable costs-packinghouse included.



Variable costs: How do labor costs compare to all variable costs-NOT packinghouse included.

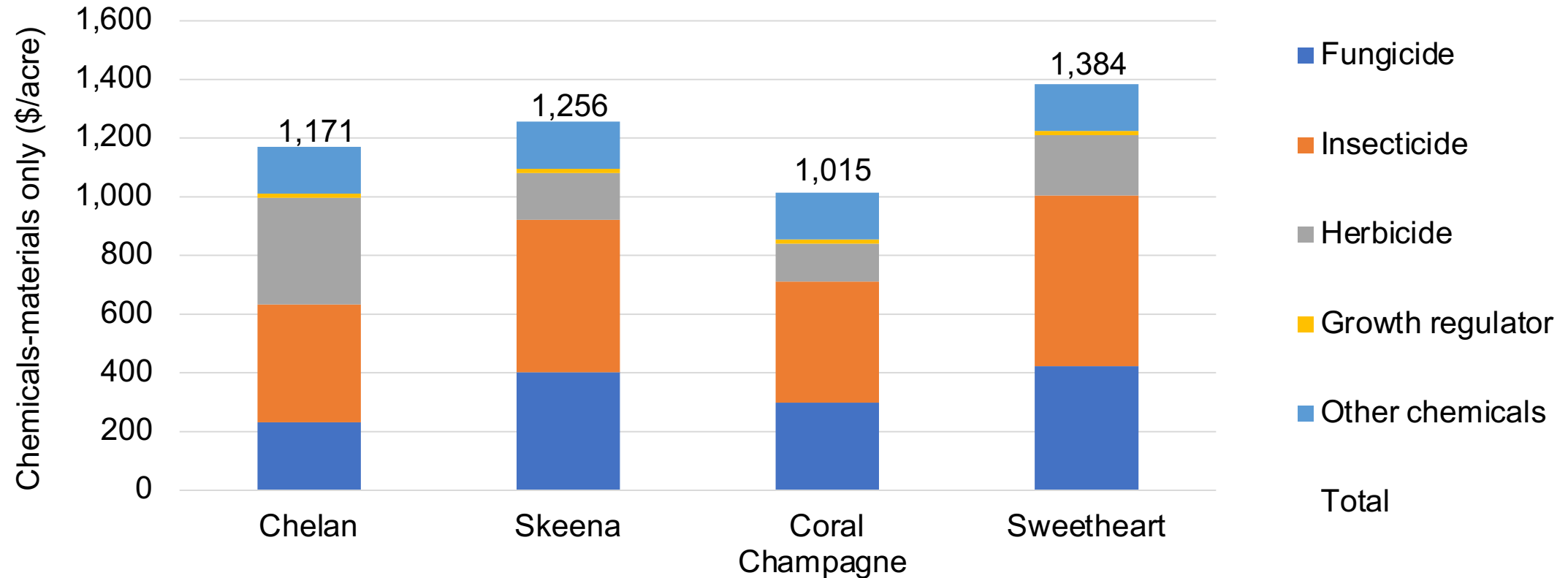


Labor costs in the field only: how do labor costs distribute across different field activities?



Production costs
on a full
production year

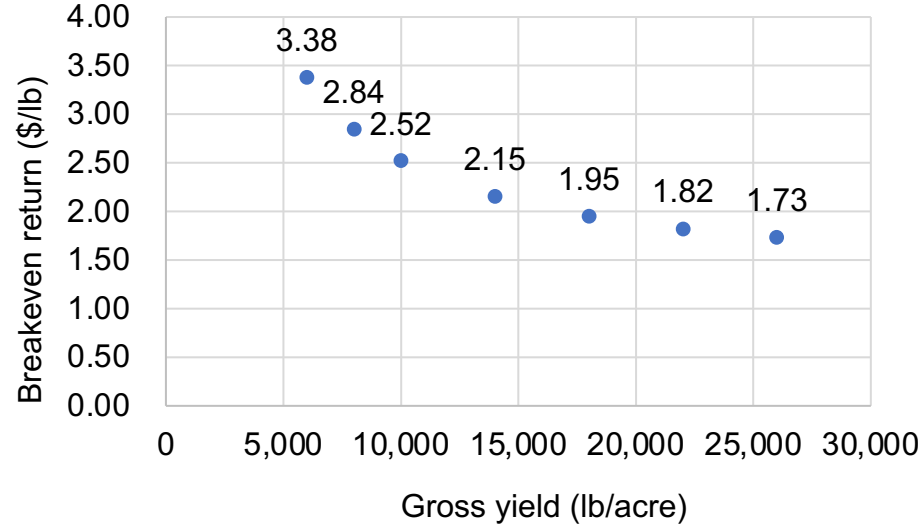
Chemicals: How do the chemical costs distribute across different categories?



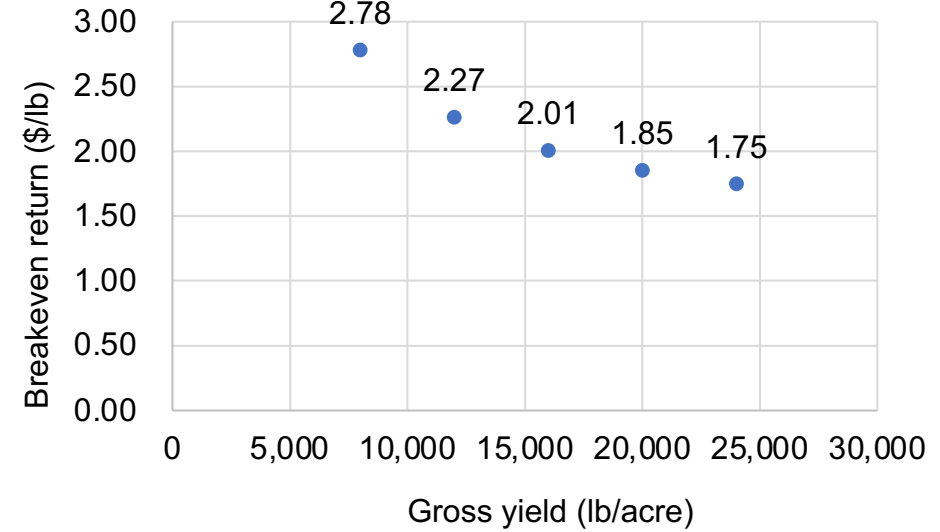
Production costs
on a full
production year

Breakeven prices at different yields

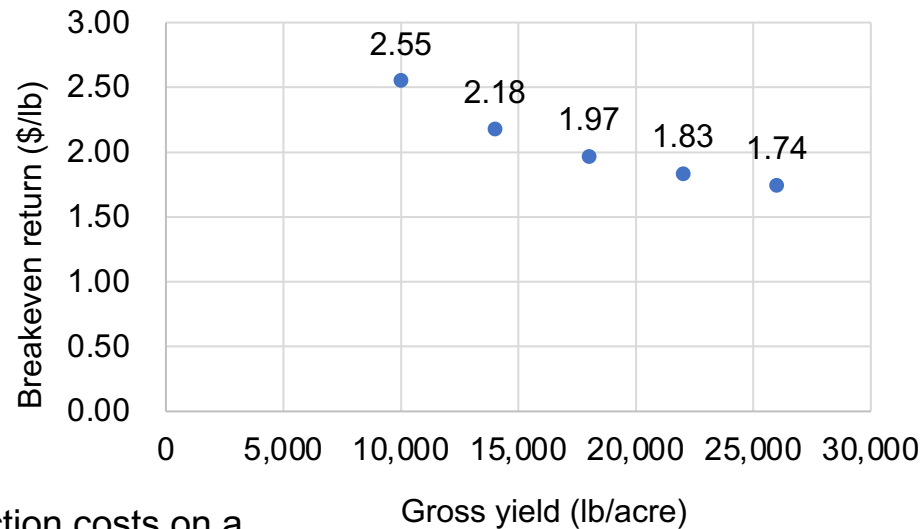
Chelan- Breakeven Return (\$/lb)



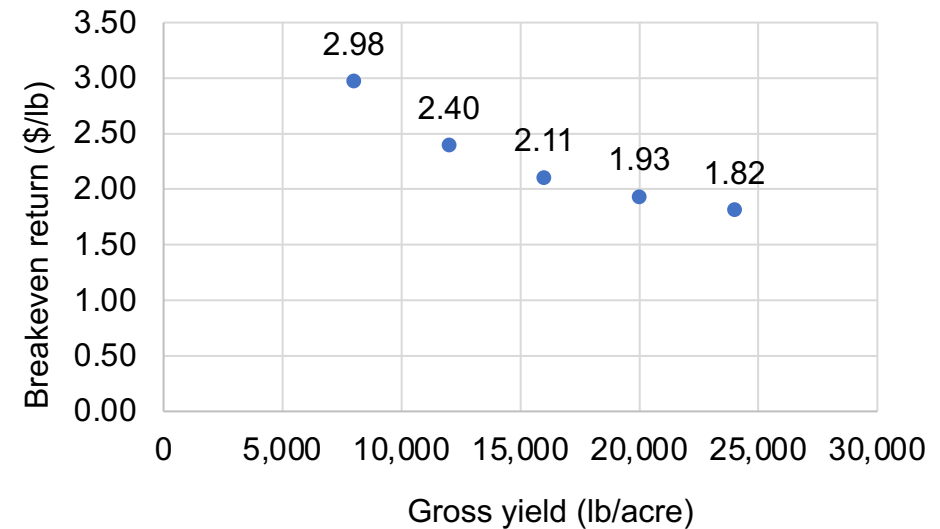
Skeena- Breakeven Return (\$/lb)



Coral Champagne-Breakeven Return (\$/lb)

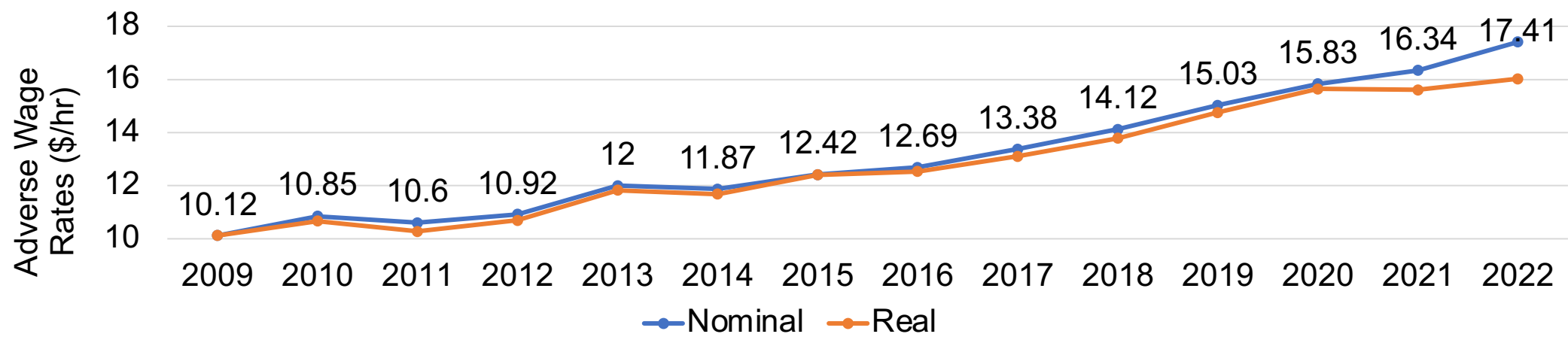


Sweetheart- Breakeven Return (\$/lb)

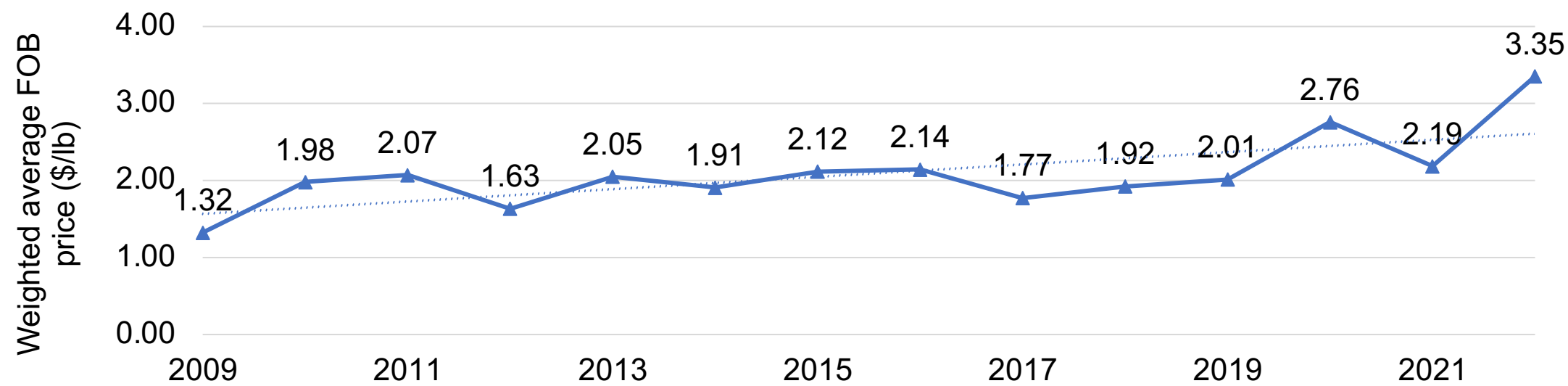


Production costs on a
full production year

WA H2A adverse wage rate



Weighted average FOB price



Concluding thoughts

- Based on study assumptions, production costs, returns, and breakeven prices and yields show that the four sweet cherry varieties are economically profitable.
 - Labor represents 61% of the variable costs in the field.
- Historical data show FOB price variability compared to the steady increase in production costs, especially labor.

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