Production Costs Update for Organic Gala and Honeycrisp Apples

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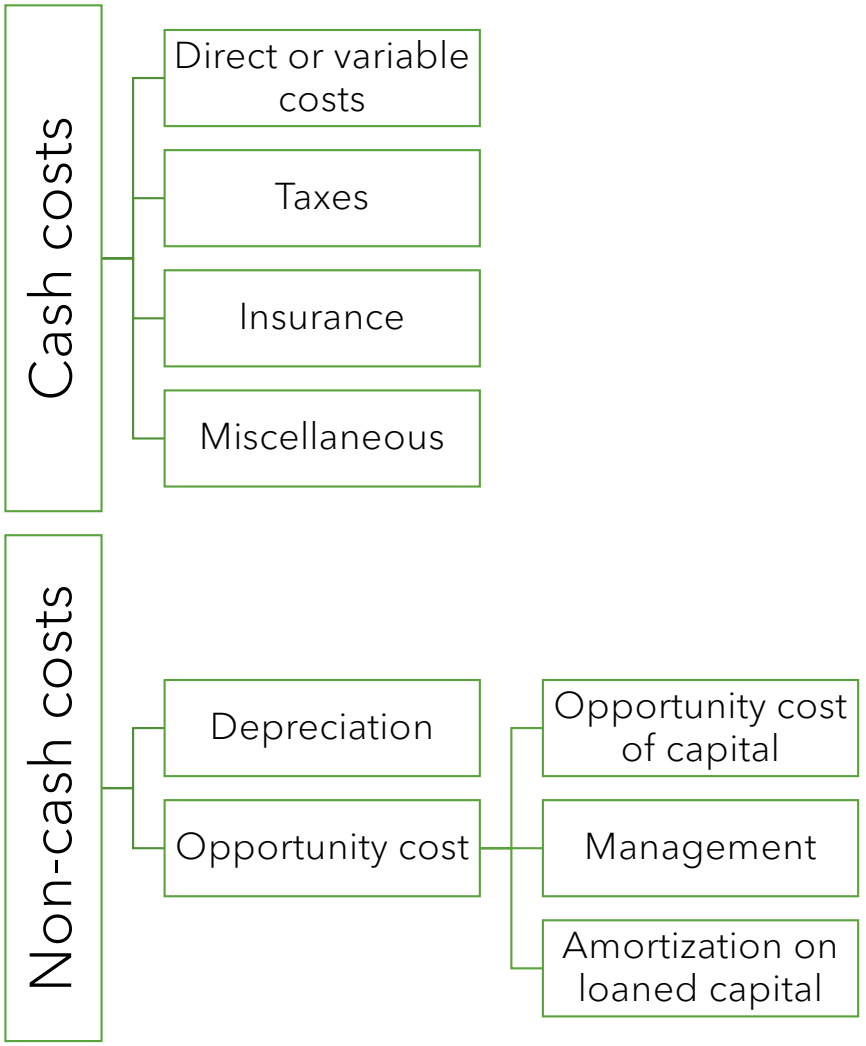
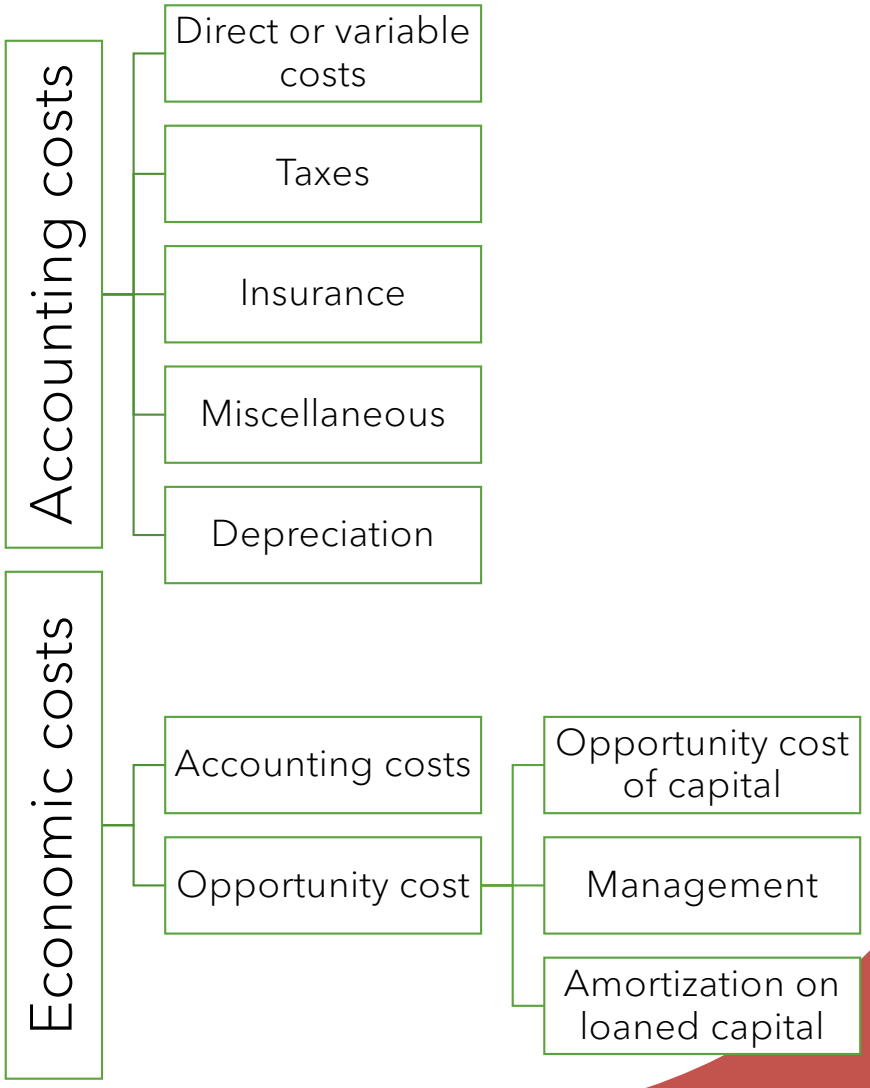
Production costs



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

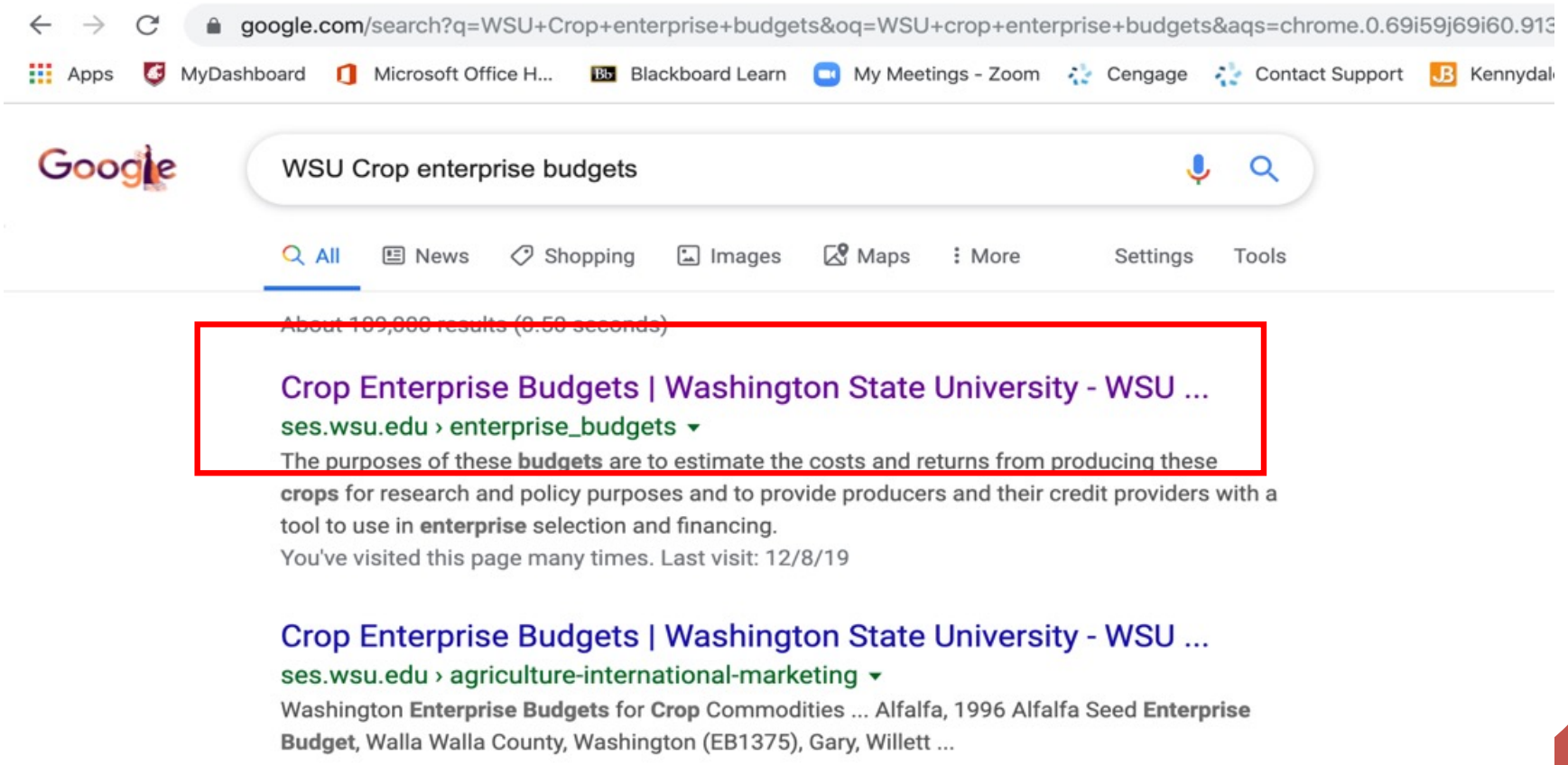
- Long-term economic situation
  Cash and non-cash costs

Photo credit: Good Fruit Grower.

WSU Apple Enterprise Budgets

Year	Enterprise budget
2009	Conventional Gala
2010	Organic Gala
2012	Conventional Honeycrisp Conventional Red Delicious
2014	Conventional Gala Conventional Red Delicious Organic Gala Organic Red Delicious
2019	Conventional Gala Conventional Fuji Conventional Granny Conventional Honeycrisp Conventional Cripps Pink
2022	Organic Gala Organic Honeycrisp

How to find WSU Apple Enterprise Budgets



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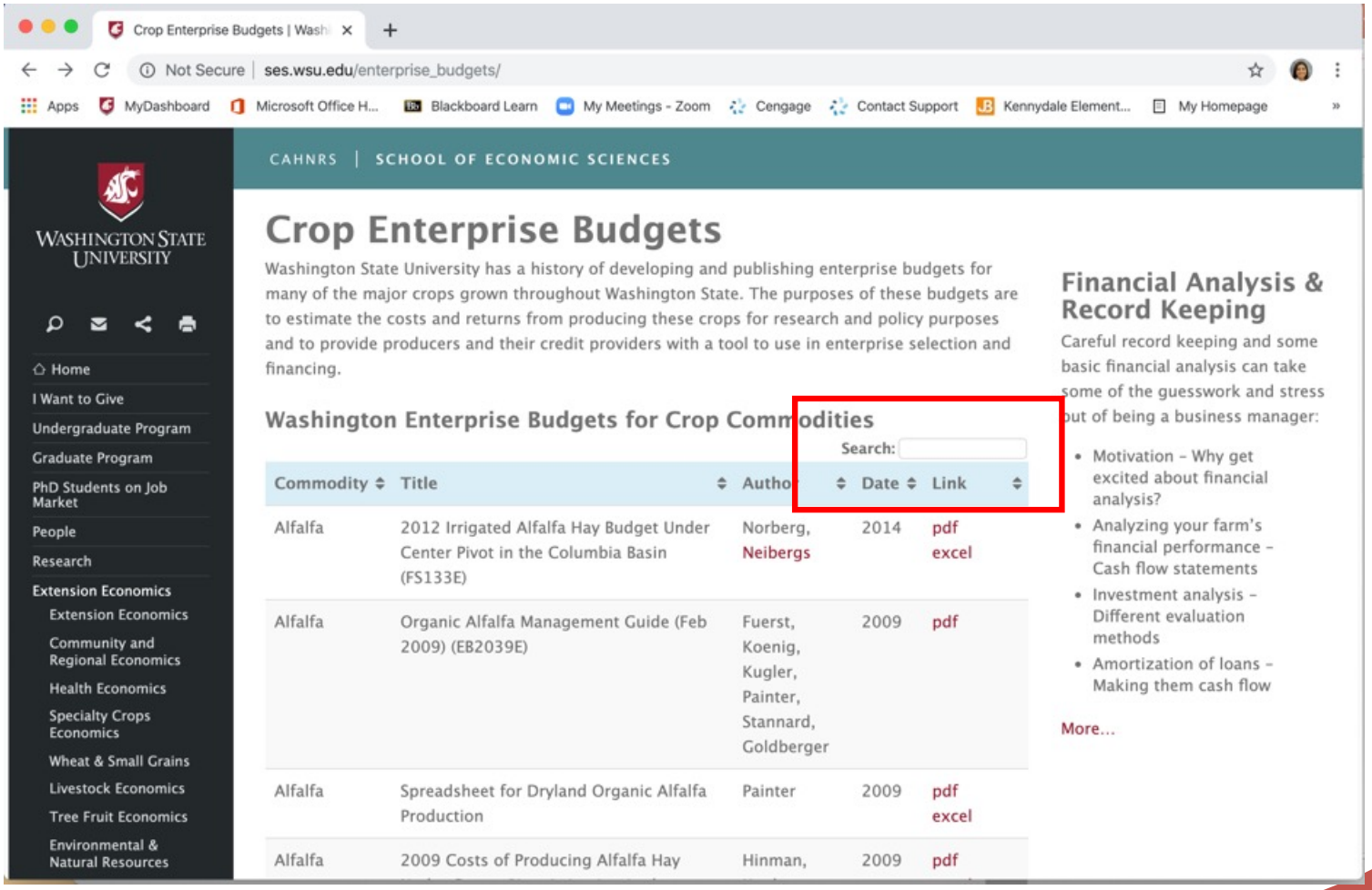

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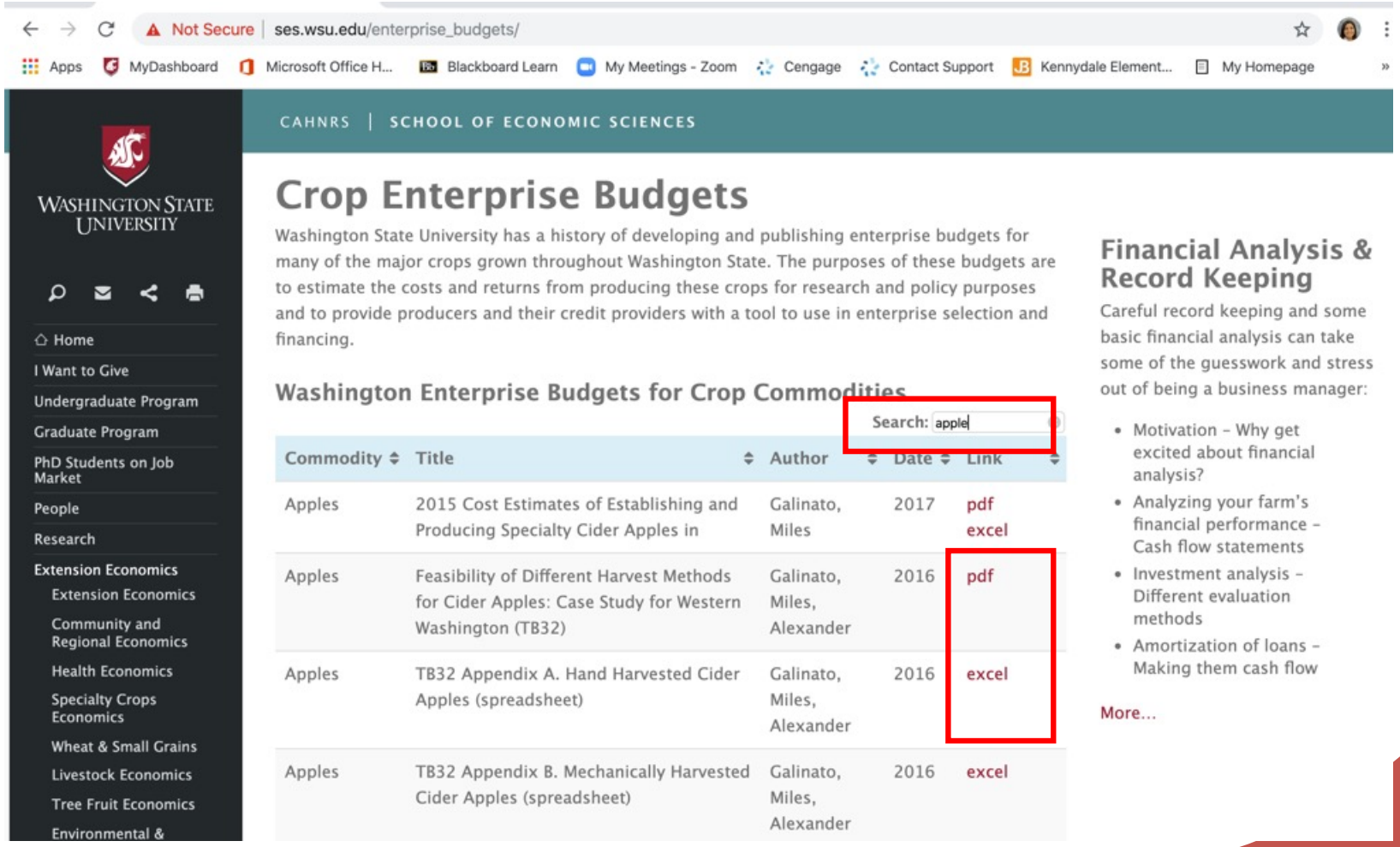


2022 WSU Enterprise Budgets - Organic Gala and Organic Honeycrisp

2022 COST ESTIMATES OF PRODUCING AND PACKING ORGANIC GALA APPLES IN WASHINGTON

Preface

The results presented in this WSU publication serve as a general guide for evaluating the feasibility of producing organic Gala apples in Washington in 2022. The primary use of this publication is in identifying inputs, costs, and yields considered typical of well-managed organic Gala apple orchards. 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
- Organic Gala prices
- Orchard size
- Management skills
- Biotic and abiotic orchard variables

Cost estimations in the enterprise budget also vary depending on its 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.

Organic Gala Production in Washington State

2022 COST ESTIMATES OF PRODUCING AND PACKING ORGANIC HONEYCRISP APPLES IN WASHINGTON

Preface

The results presented in this WSU publication serve as a general guide for evaluating the feasibility of producing organic Honeycrisp apples in Washington in 2022. The primary use of this publication is in identifying inputs, costs, and yields considered typical of well-managed organic Honeycrisp apple orchards. 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
- Organic Honeycrisp prices
- Orchard size
- Management skills
- Biotic and abiotic orchard variables

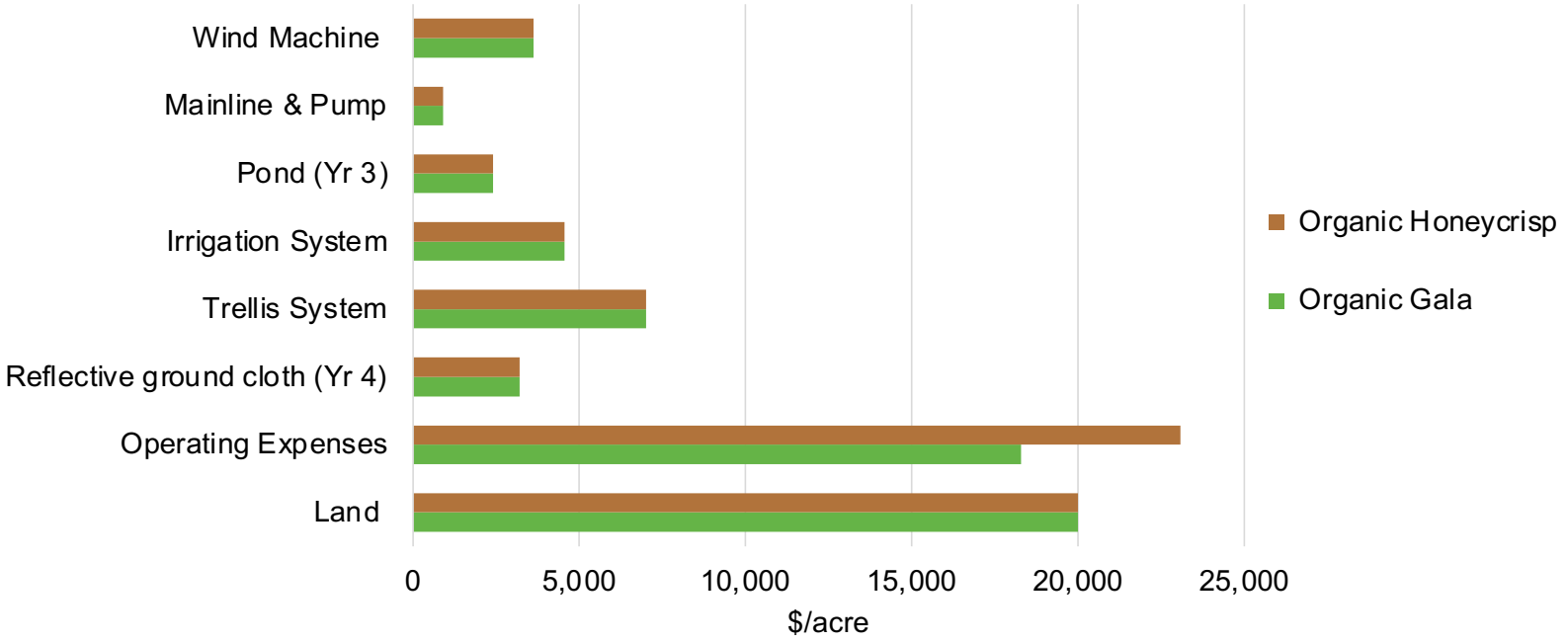
Cost estimations in the enterprise budget also vary depending on its intended use. To avoid drawing unwarranted conclusions for any particular orchard, readers must closely examine the assumptions made in this guide and then adjust the costs, returns, or both as appropriate for their own orchard operation.

Organic Honeycrisp Production in Washington State

WSU Budgets - Assumptions

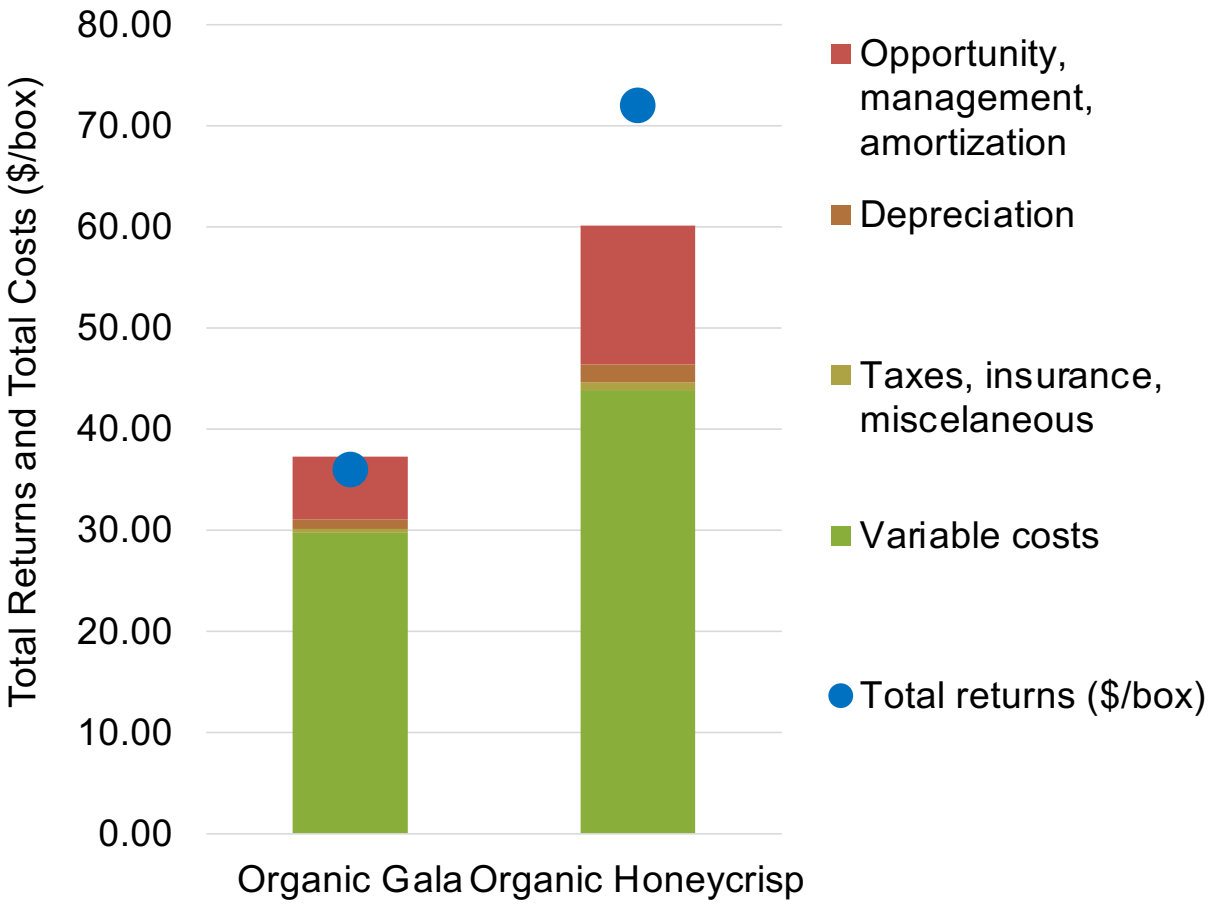
	Organic Gala	Organic Honeycrisp
Farm size (acre)	300	300
Productive block size (acre)	55	33
Gross yield full production (bin/acre)	80	65
Bin size (lb/bin)	950	690
Packout (box/bin)	19	13
FOB price ($/40-lb box)	36	72
In-row spacing (feet)	4	3
Bet. row spacing (feet)	10	10
Root stock	Geneva series	Geneva series
Life of planting (years)	20	15
Tree density (trees/acre)	1,089	1,452
Trellis system	Spindle trellis system	
Block architecture	Randomly trained w/18” radius from tree center	

Capital Requirements



	Organic Gala	Organic Honeycrisp
Total Requirements ($/acre)	59,958	64,761

Total Costs and Returns - Summary

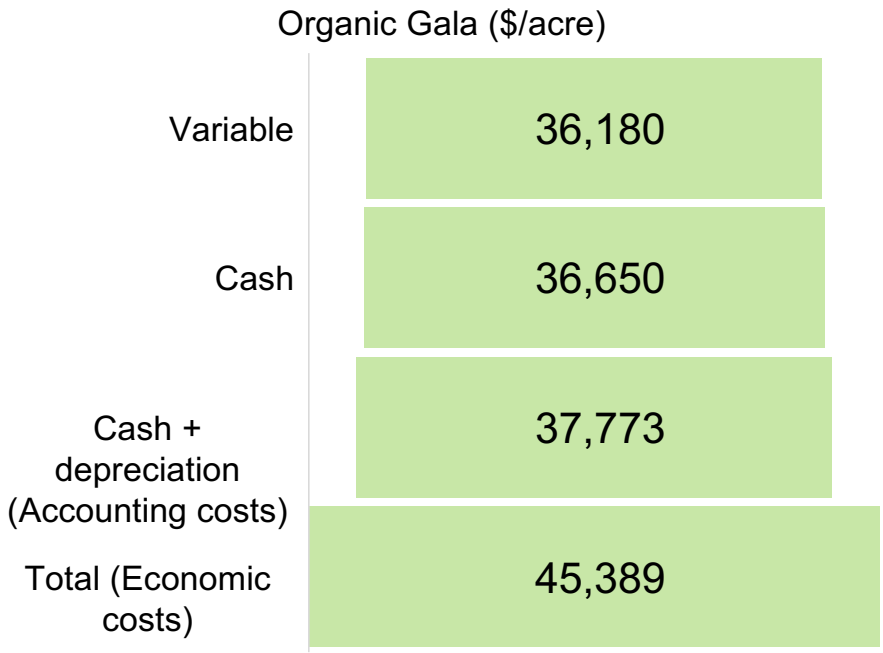


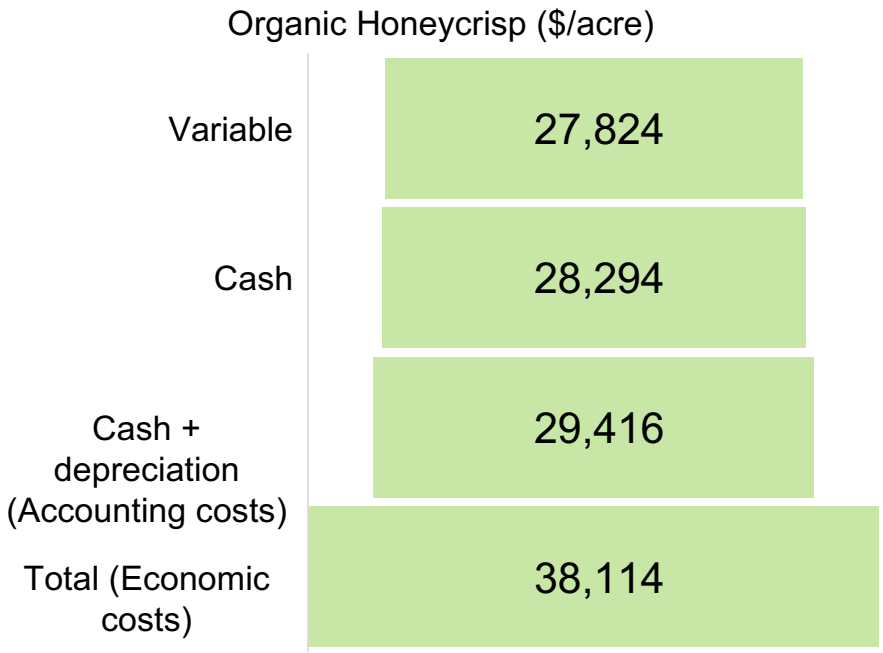
Why in $/box?

	Organic Gala	Organic Honeycrisp
Productive block size (acre)	55	33
Gross yield full production (bin/acre)	80	65
Bin size (lb/bin)	**950**	**690**
Packout (box/bin)	19	13
FOB price ($/40-lb box)	36	72

Cost categories:

1. Variable
2. Cash
3. Cash + Depreciation (Accounting cost)
4. Total Cost (Economic cost)





Total Costs and Returns

	Total production (bins/acre)	Packout (%)	Packout (box/bin)	FOB Price ($/box)
Organic Gala	80	80	19	36
Organic Honeycrisp	65	75	13	72

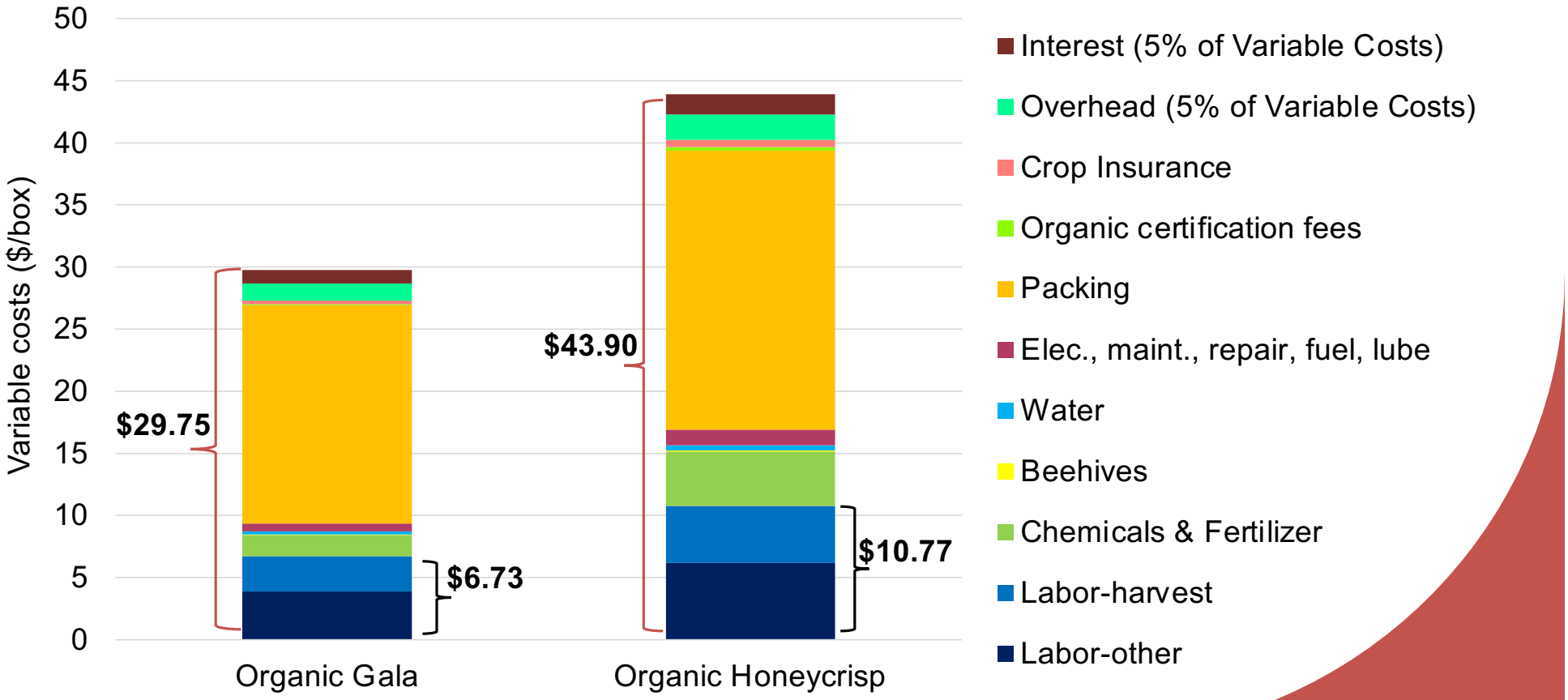
Total returns ($/acre)	Total costs (Economic costs) ($/acre)	**ECONOMIC PROFITS ($/acre)**
43,776	45,389	**-1,613**
45,630	38,114	**7,516**

	Total production (bins/acre)	Packout (%)	Packout (box/bin)	FOB Price ($/box)
Organic Gala	80	80	19	36
Organic Honeycrisp	65	75	13	72

Total returns ($/acre)	Costs (Accounting costs) ($/acre)	**ACCOUNTING PROFITS ($/acre)**
43,776	37,773	**6,003**
45,630	29,416	**16,214**

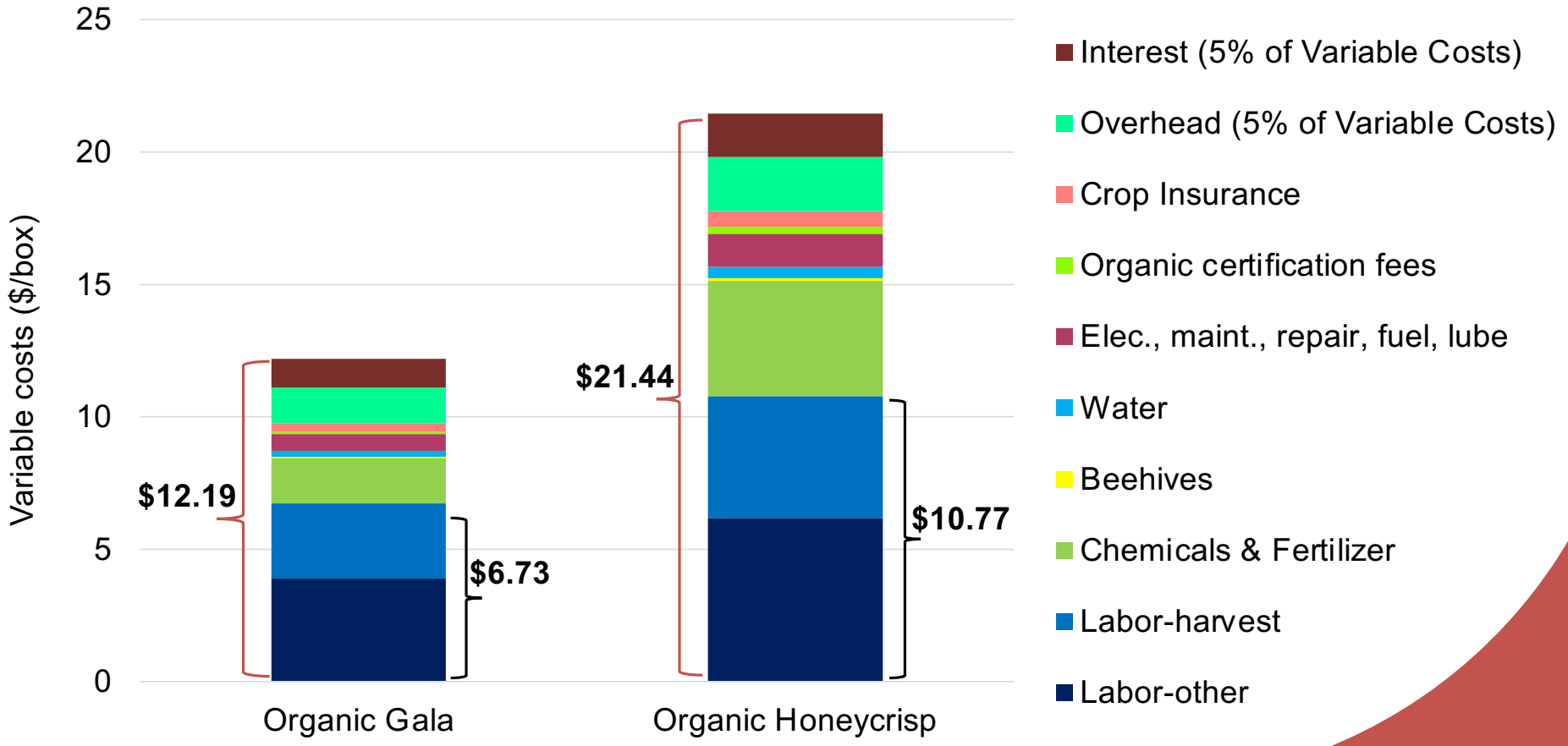
Variable Costs

How do labor costs compare to total variable costs (packing costs included)?



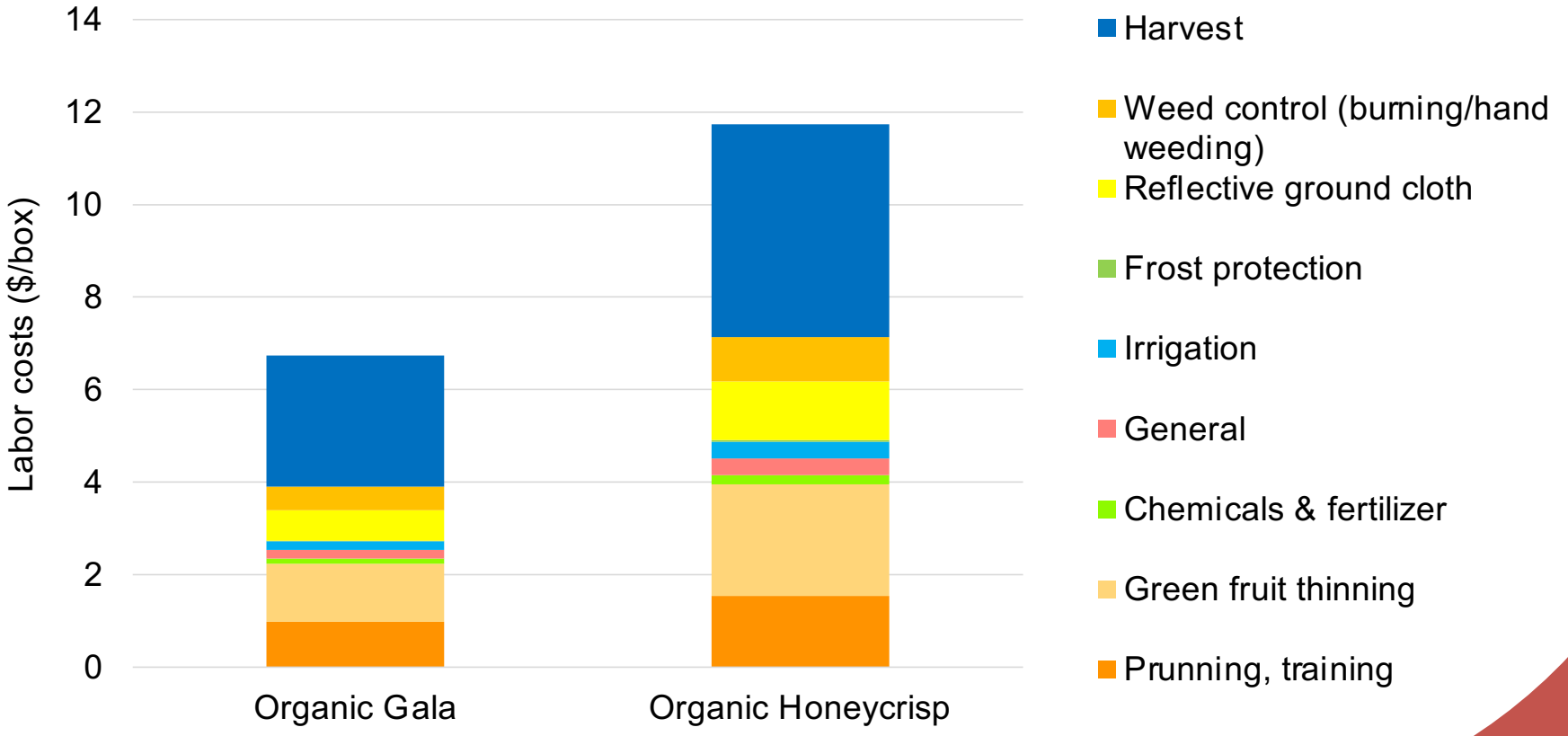
Variable Costs

How do labor costs compare to total variable costs (packing costs excluded)?



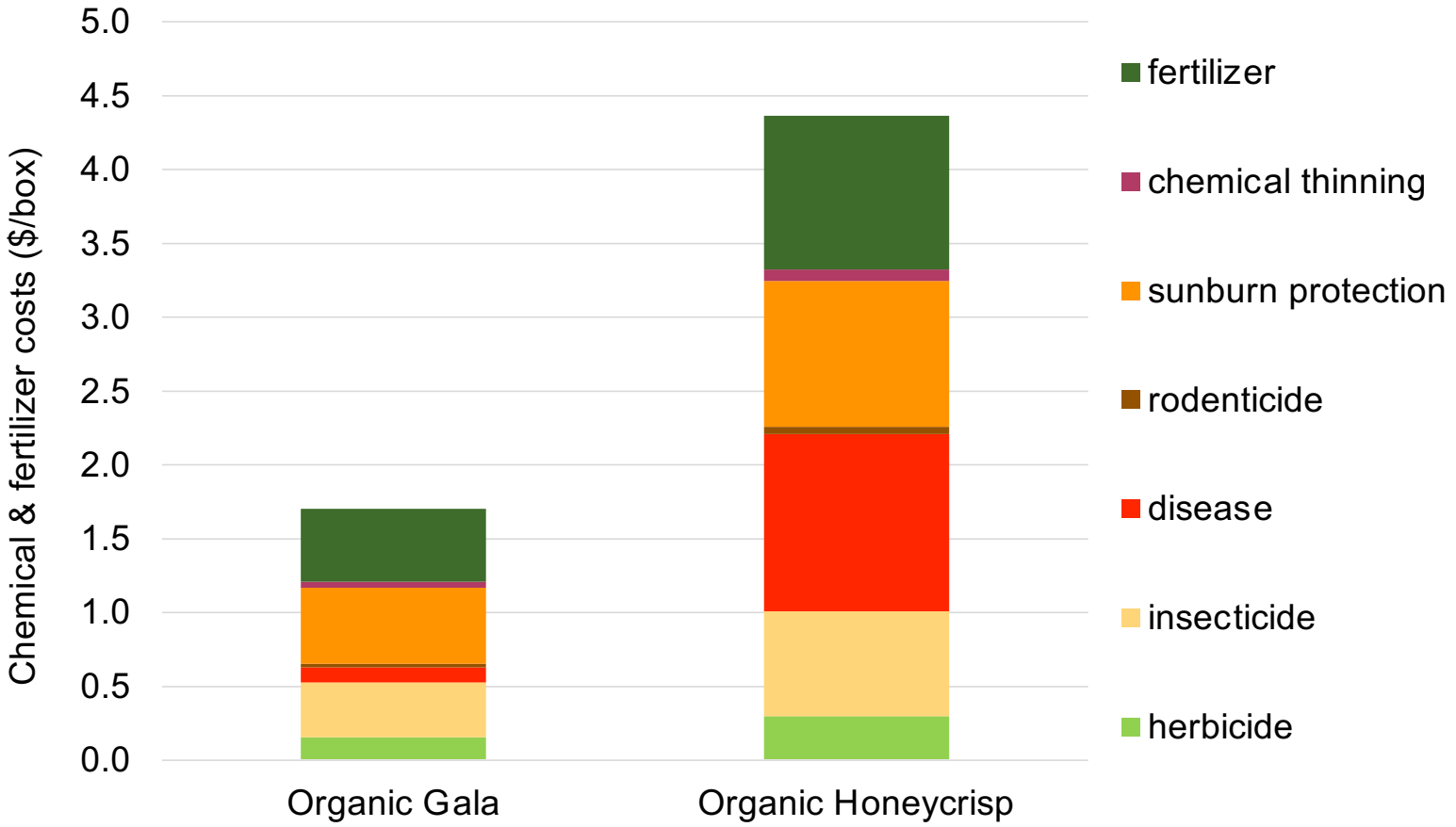
Labor Costs (in the field only)

How are labor costs distributed across various field activities?



Chemicals and Fertilizer

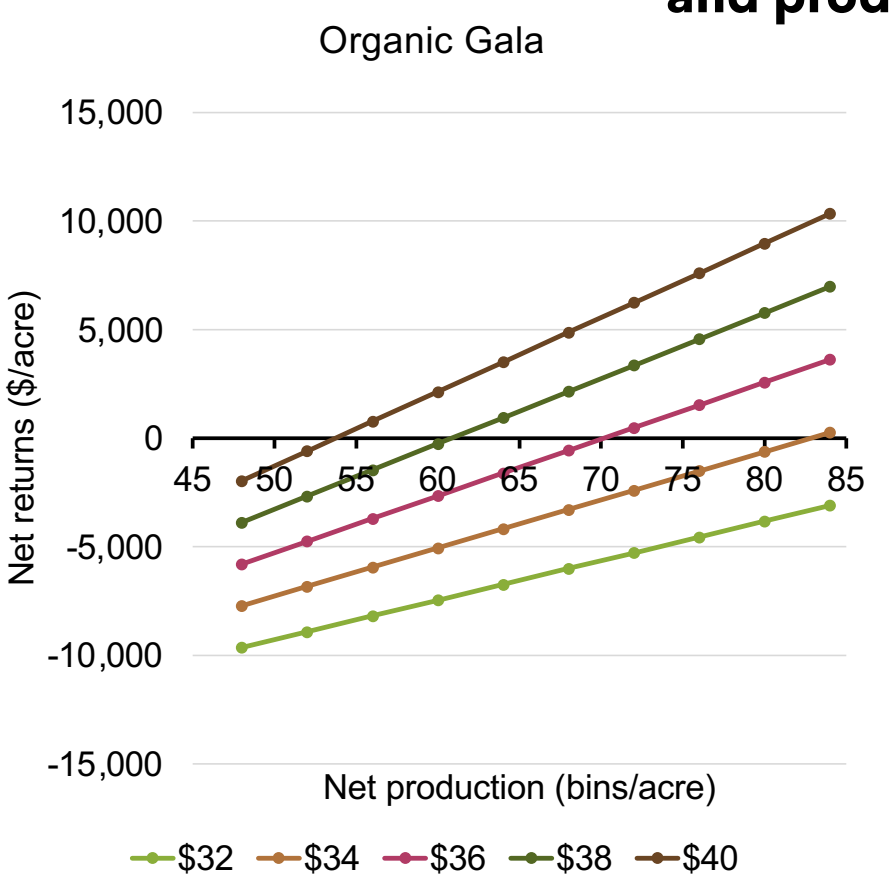
How are chemical costs distributed across different types?

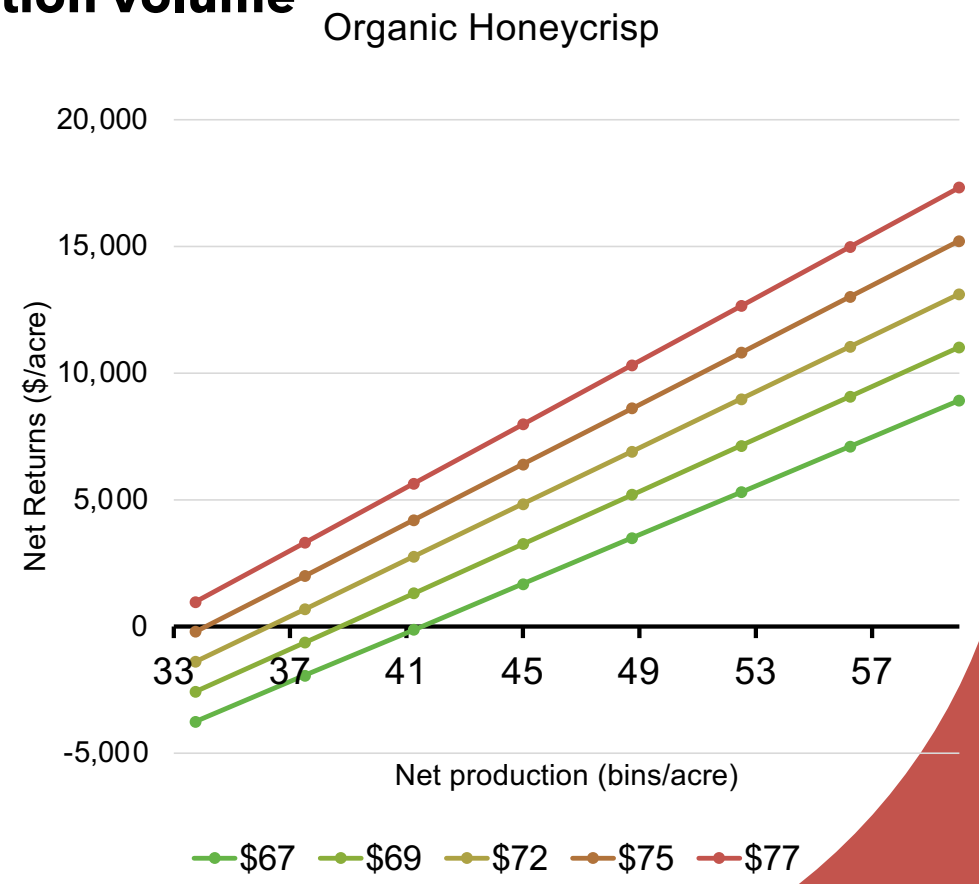


Break-even Prices ($/box)

Cost category	Organic Gala	Organic Honeycrisp
Variable	$29.75	$43.90
Cash	$30.14	$44.64
Cash + depreciation (Accounting costs)	$31.06	$46.42
Total (Economic costs)	$37.33	$60.14

Sensitivity Analyses: Net returns at different FOB price ($/box) and production volume





Grower receives the residual price of the supply chain.

	Price ($/lb)	% of the price
Consumer price per pound at the retail market (Example: Organic Gala apple)	2.99	100
Retailer	2.06	69
Packinghouse + Marketer	0.44	15
Grower	0.49	16

2022 Food dollar: Marketing bill (nominal)

Source: https://www.ers.usda.gov/data-products/food-dollar-series/documentation

Concluding Remarks

- Profits will not be > 0 every year
  - Price fluctuation
  - Yield fluctuation
- Labor is the largest cost in the field.
- Break-even prices ($/box):

Cost category	Organic Gala	Organic Honeycrisp
Variable – Shutdown price	$29.75	$43.90
Cash + depreciation (Accounting costs)	$31.06	$46.42
Total (Economic costs)	$37.33	$60.14

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https://ses.wsu.edu/enterprise_budgets/

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Thank you!