

OREGON WINE



SYMPOSIUM

State of Winegrowing in Oregon Economics and Strategies

Mike McNally – Fairsing Vineyard

FAIRSING
VINEYARD

Vineyard Business - Financial Returns

- Financial Return on Investment is determined by **Cash Flows over time**.
Internal Rate of Return (IRR) and Discounted Cash Flow (DCF)

- **Key Cash Flows**

 - Capital Expenditures – Vineyard Development, Equipment, Land (?)

 - EBITDA - Earnings Before Interest Taxes and Depreciation

 - EBITDA is a proxy for cash flow from operations

Key Levers → Fruit Yields, Fruit Pricing, Vineyard Operating Costs, Fruit Quality

Vineyard Revenue (fruit yield X price)	\$10,500/acre
Vineyard Operating Cost (includes harvest)	<u>\$6,000/acre</u>
Gross Margin	\$4,500/acre
Overhead Costs – Insurance, Taxes, Admin.	<u>\$500/acre</u>
EBITDA	\$4,000/acre

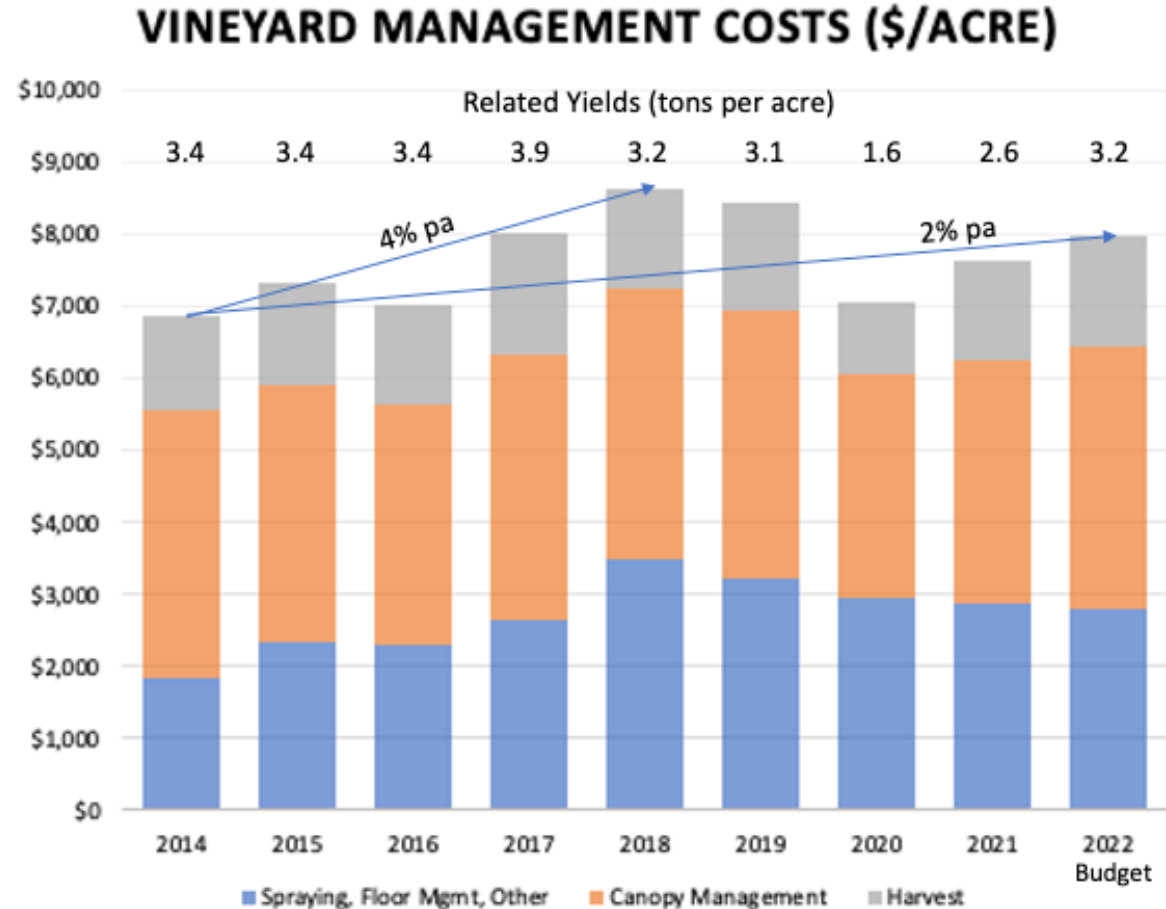
Vineyard Management Cost Trends

Vineyard Overview

43 acres, 2240 vines per acre,
Target yield: 3.2 tons per acre,
LIVE farmed w/o herbicides,
Hand harvested.

Overhead Costs Excluded

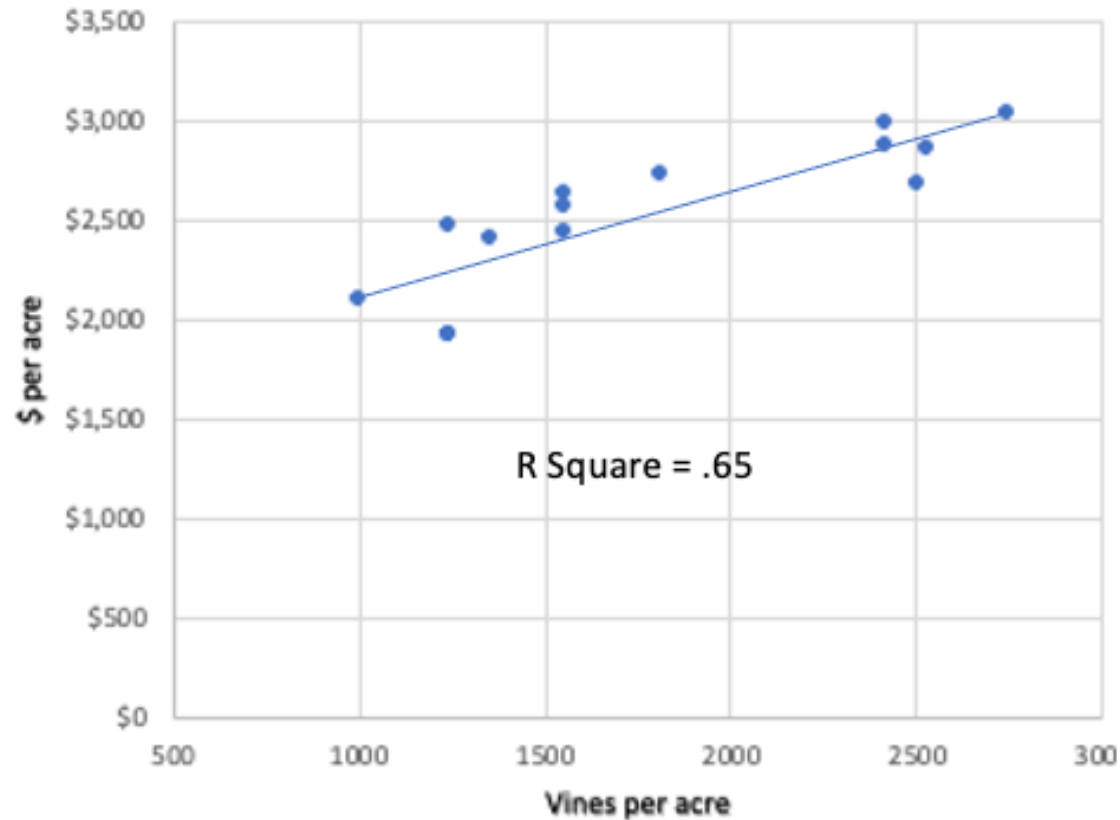
Interest, Insurance, Taxes,
Professional fees, and
General & Administrative.



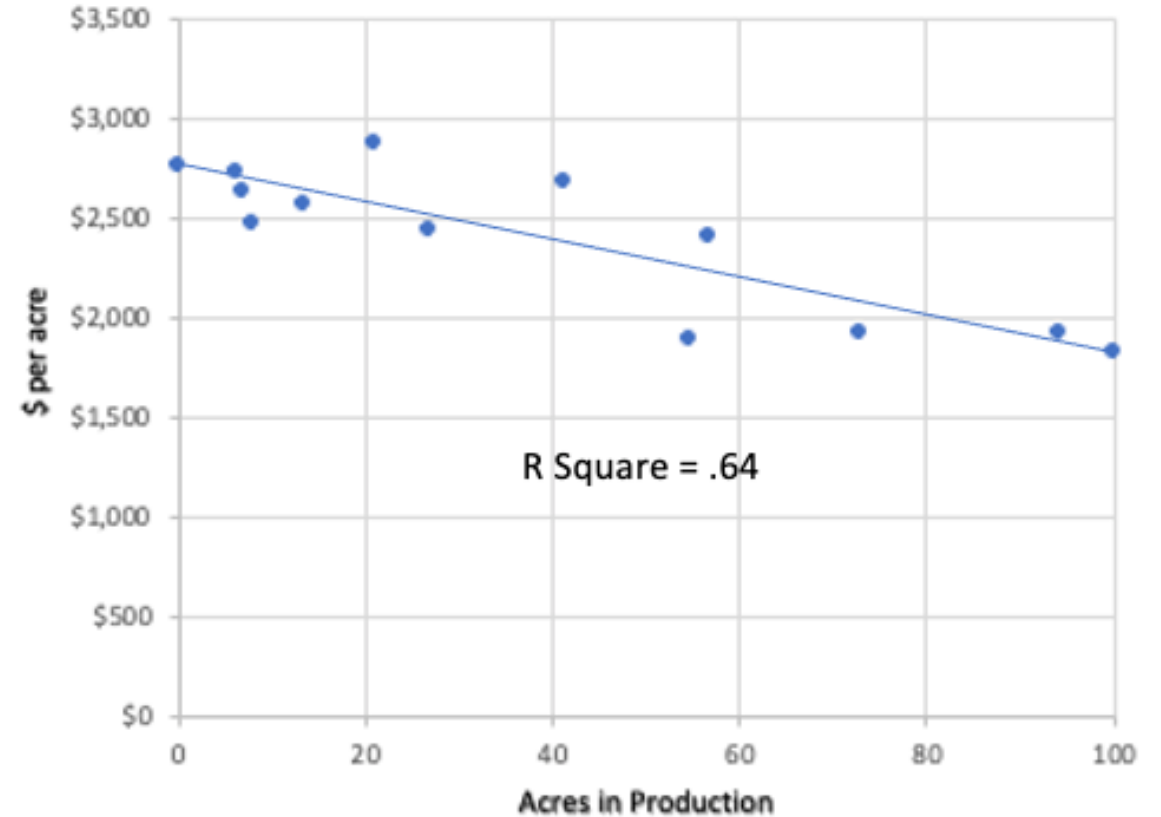
Vineyard Management Cost Trends

Canopy Management Cost per Acre - 2021

Canopy Management Cost vs. Vine per Acre



Canopy Management Cost vs. Acres in Production

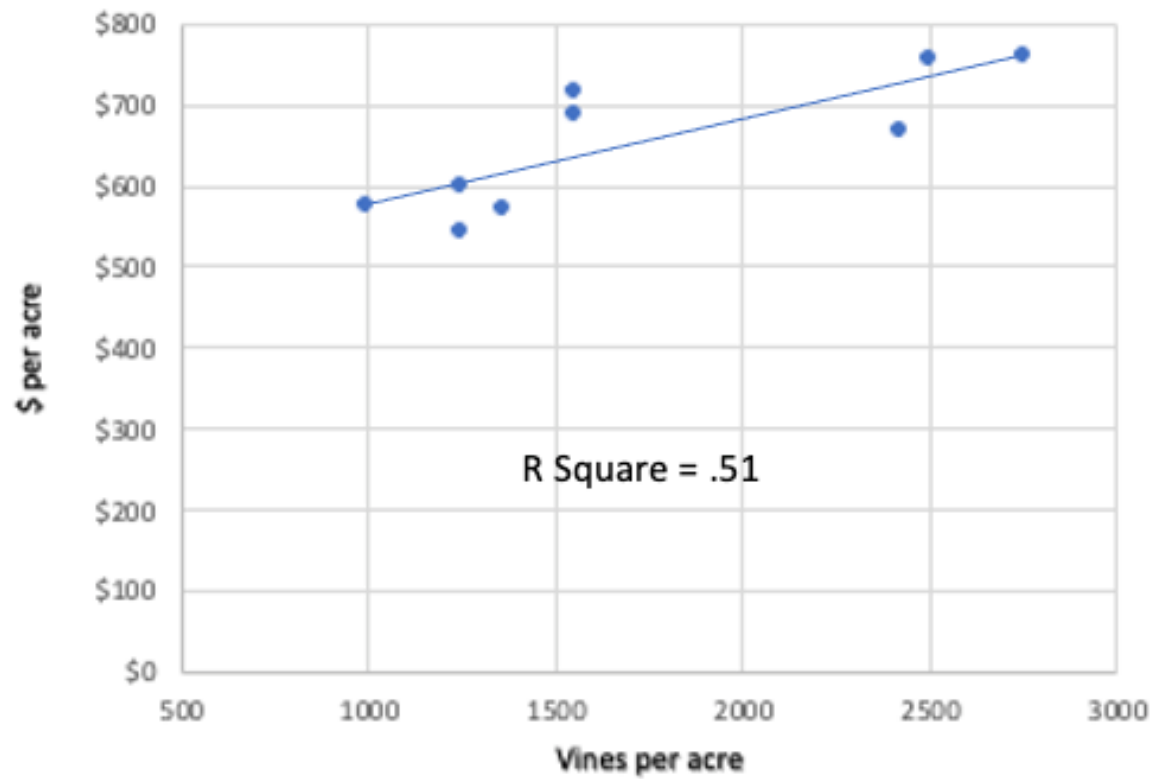


VSP Trellis: Prune, Pull Brush, Tie, Position Wires/Shoots, Sucker/Shoots

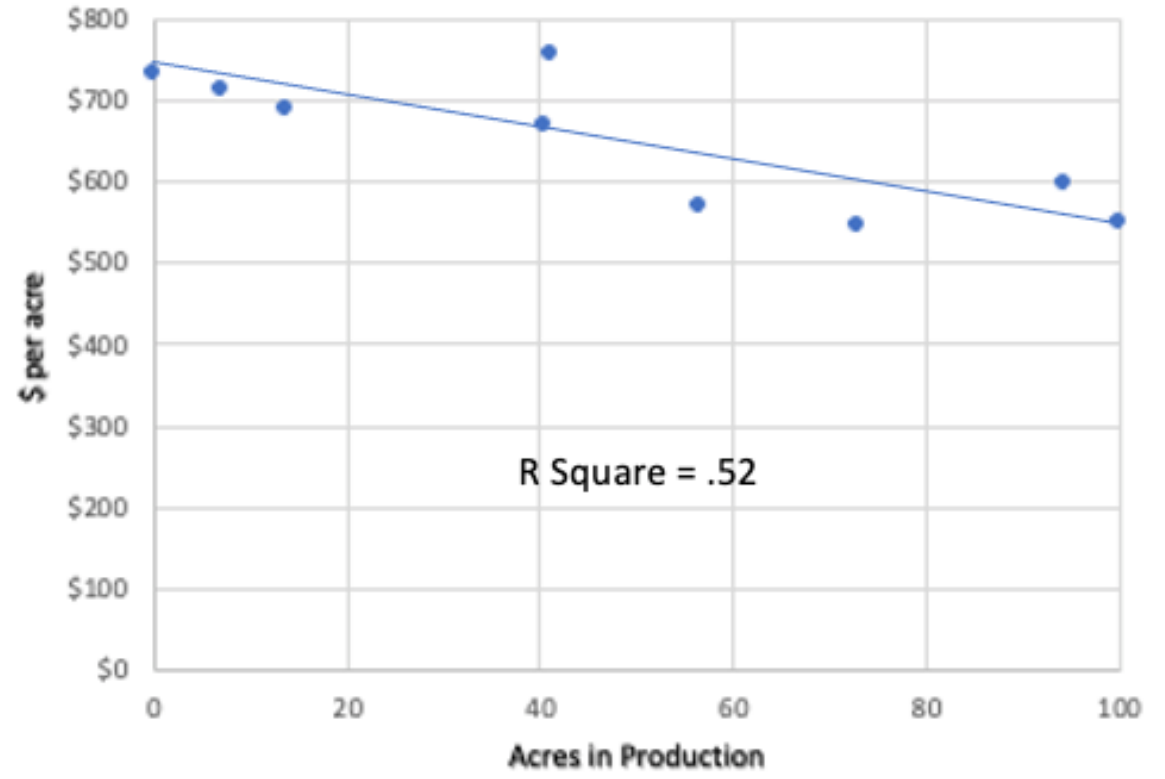
Vineyard Management Cost Trends

Fungicide Spraying Cost per Acre - 2021

Fungicide Spraying Cost vs. Vines per Acre
Non-Organic Vineyards



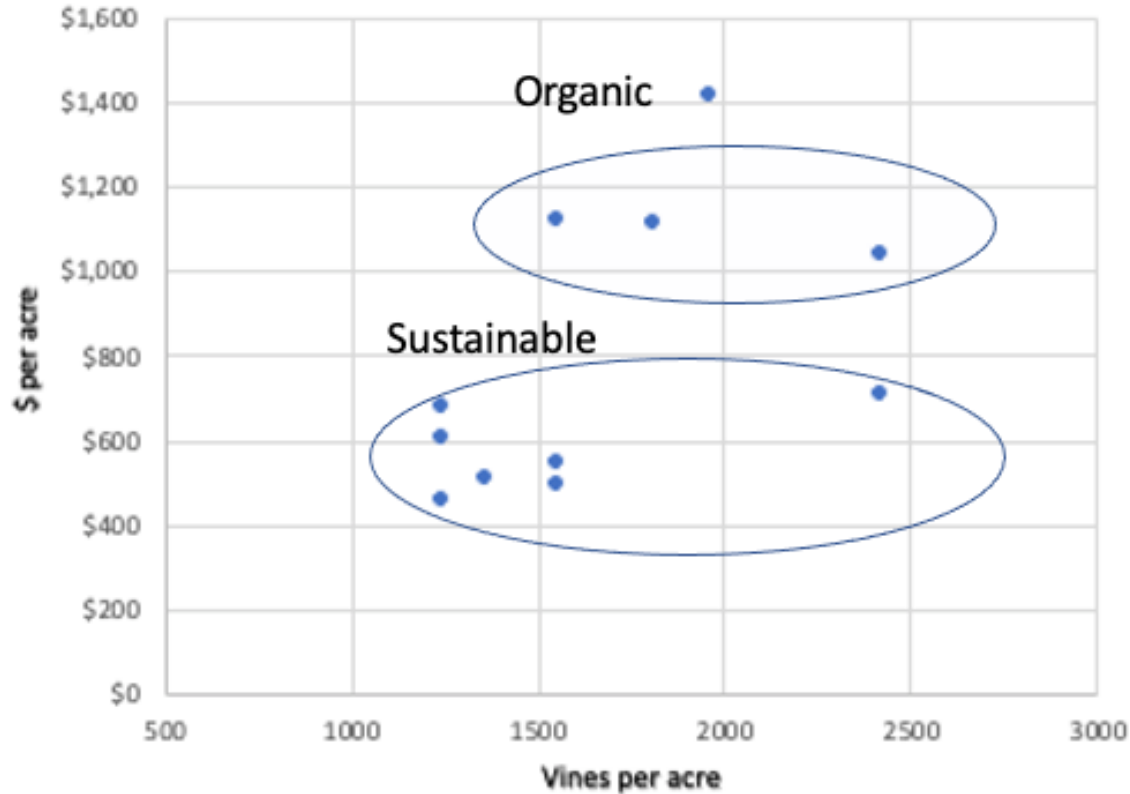
Fungicide Spraying Cost vs. Acres in Production
Non-Organic Vineyards



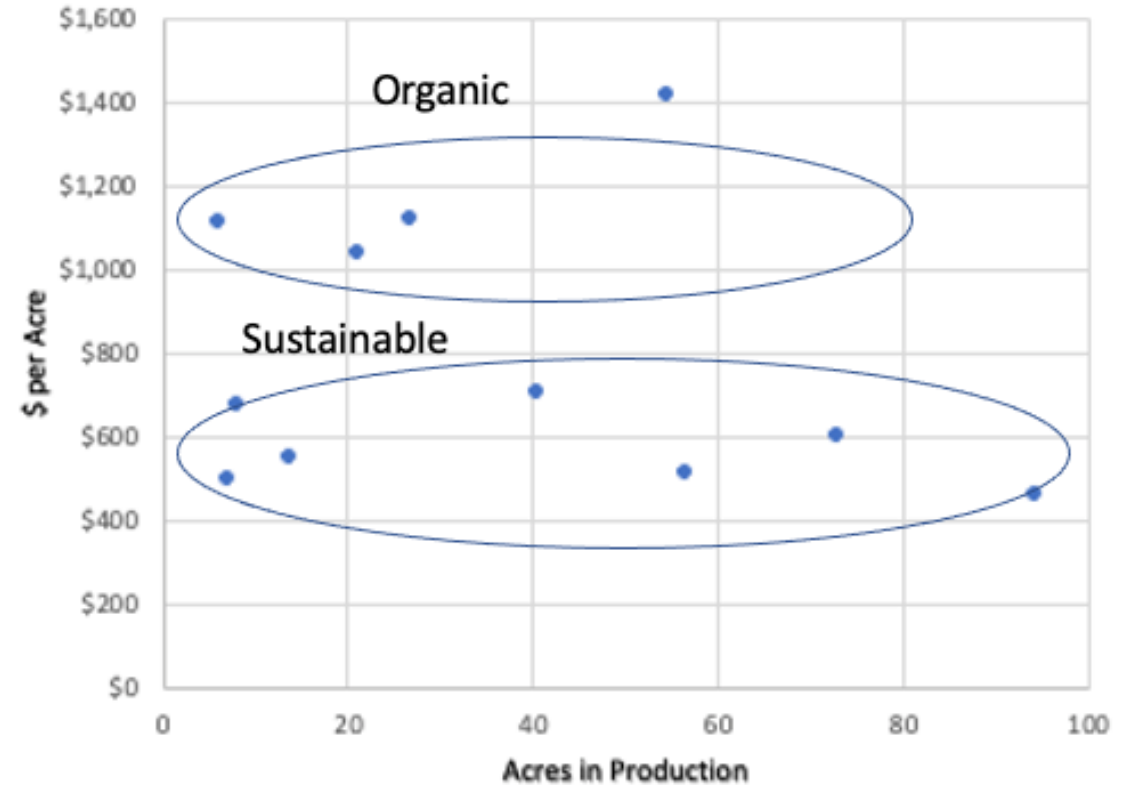
Vineyard Management Cost Trends

Vineyard Floor Management Cost per Acre - 2021

Vineyard Floor Cost vs. Vines per Acre



Vineyard Floor Cost vs. Acres in Production

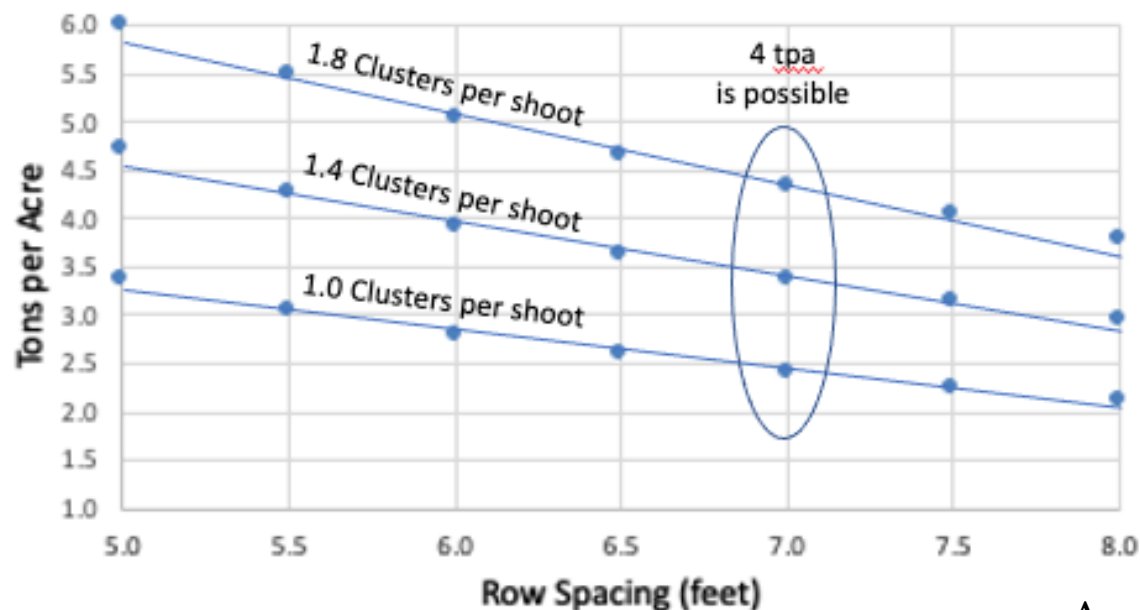


Sustainable vineyards typically have no in-row cultivation costs

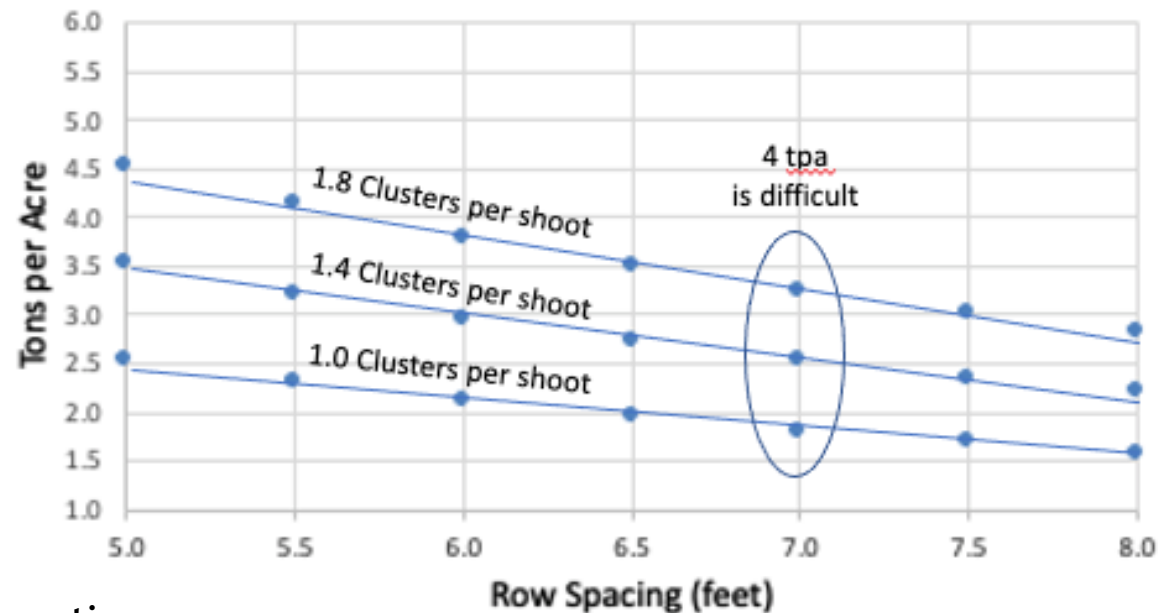
Fruit Yields - Indicative

Cluster Weight vs. Row Spacing vs. Fruit Thinning

Fruit Yields vs. Row Spacing
100 Gram Clusters



Fruit Yields vs. Row Spacing
75 gram clusters



Assumptions

- Fruit Yields are proportional to linear foot of canopy
- Vertical Shoot Positioning Trellis System – one fruit wire
- Cluster weights are typical for Pinot noir and Chardonnay
- 3.5 shoots per foot

Fruit Price Trends - Indicative

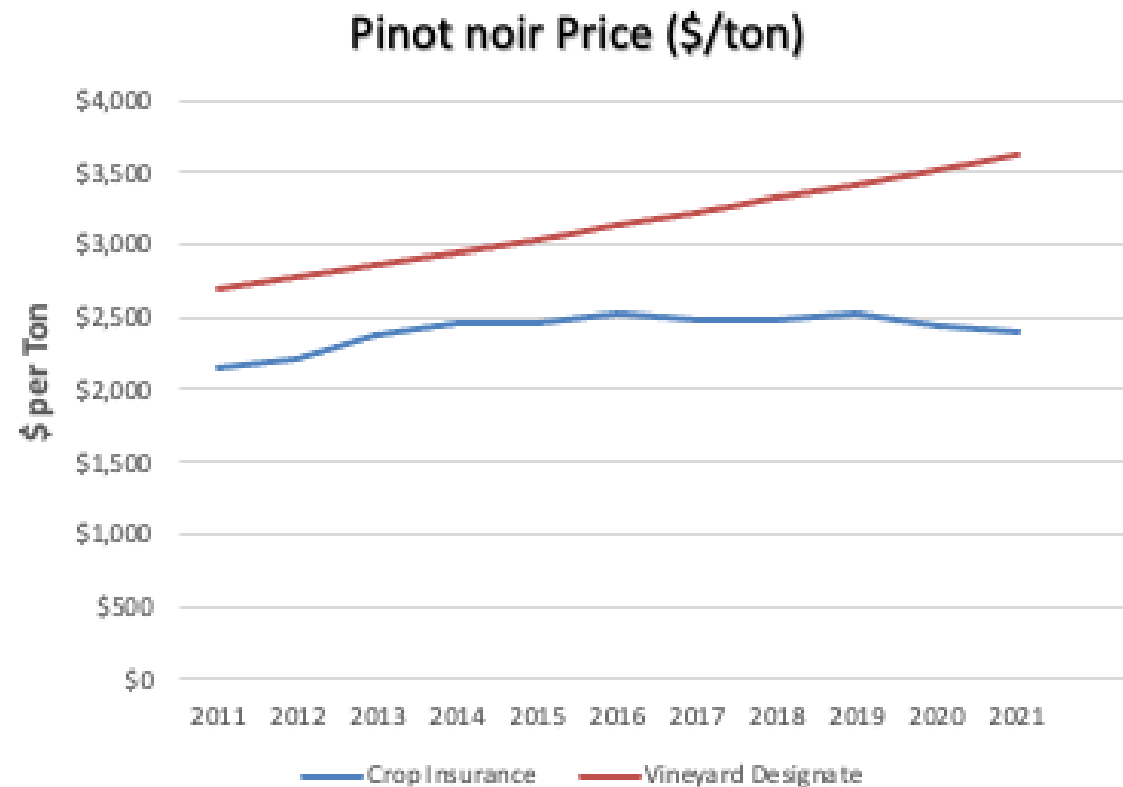
Bulk Pricing vs. Vineyard Designate Pricing

Vineyard Designate Pricing

- Willamette Valley Pinot noir
- Vines > 8 years old
- Low Yields
- Precision Farming

Crop Insurance Pricing

- RMA Established Prices of Pinot Noir
RMA.USDA.gov website



Vineyard Scenarios

Scenario A

Moderate Scale, Dense Vine Spacing, Moderate Yield, Organic/Biodynamic Farmed, Hand Harvest

Scenario B

Moderate Scale, Typical Vine Spacing, Moderate Yield, LIVE Farmed w/ in-row cultivation, Hand Harvest

Scenario C

Moderate Scale, Typical Vine Spacing, High Yield, LIVE Farmed w/o in-row Cultivation, Machine Harvest

Scenario D

Larger Scale, Typical Vine Spacing, High Yield, LIVE Farmed w/o in-row Cultivation, Machine Harvest

	A	B	C	D
Acres	20	20	20	80
Vineyard Spacing	3.3' x 5.9'	5.0' x 7.0'	5.0' x 7.0'	5.0' x 7.0'
Vines per Acre	2240	1250	1250	1250
Tons per acre	3.3	3.0	4.0	4.0
Farming	Organic	LIVE	LIVE	LIVE
Harvest	Hand	Hand	Machine	Machine

Vineyard Management Cost Scenarios

Category	A	B	C	D
	Cost per Acre - 2021			
Prune, Pull Brush, Tie	\$1,000	\$850	\$850	\$825
Catch wires & Shoot positioning	\$1,000	\$800	\$800	\$725
Sucker/shoot thin	\$650	\$550	\$550	\$450
Leaf removal	\$275	\$275	\$275	\$275
Fruit thin	\$375	\$375	\$125	\$125
Hedge	\$300	\$225	\$225	\$225
Subtotal Canopy Management	\$3,600	\$3,075	\$2,825	\$2,625
Fungicide Sprays	\$850	\$630	\$630	\$630
Vineyard Floor	\$1,200	\$600	\$600	\$600
Repairs & Maintenance	\$400	\$400	\$400	\$400
Supplies, Fuel, Utilities, Other	\$550	\$550	\$550	\$550
Management, Test & Estimate, deliveries	\$650	\$650	\$650	\$500
Subtotal Other Vineyard	\$3,650	\$2,830	\$2,830	\$2,680
Total Vineyard Management	\$7,250	\$5,905	\$5,655	\$5,305
Harvest - including delivery (per ton)	\$450	\$450	\$250	\$250
Subtotal Harvest Cost (per acre)	\$1,485	\$1,350	\$1,000	\$1,000
Total Operating Cost (per acre) *	\$8,735	\$7,255	\$6,655	\$6,305

* Excludes overhead costs - insurance, property tax, bookkeeping/accounting, professional fees, etc.



Vineyard Management Gross Margin Scenarios

	A	B	C	D
	Cost per Acre - 2021			
Subtotal Canopy Management	\$3,600	\$3,075	\$2,825	\$2,625
Subtotal Other Vineyard	\$3,650	\$2,830	\$2,830	\$2,680
Harvest - including delivery	\$1,485	\$1,350	\$1,000	\$1,000
Total Operating Cost *	\$8,735	\$7,255	\$6,655	\$6,305
	Revenue - 2021			
Tons per acre	3.3	3.0	4.0	4.0
Revenue per ton	\$3,800	\$3,000	\$2,600	\$2,600
Revenue per acre	\$12,540	\$9,000	\$10,400	\$10,400
Gross Margin per acre	\$3,805	\$1,745	\$3,745	\$4,095

* Excludes overhead costs - insurance, property tax, bookkeeping/accounting, professional fees, etc.

Vineyard Financial Returns – Indicative 2021

	A	B	C	D
Gross Margin per acre	\$3,805	\$1,745	\$3,745	\$4,095
Overhead Costs per acre	\$500	\$500	\$500	\$400
EBITDA	\$3,305	\$1,245	\$3,245	\$3,695
Capital Investment Costs *				
Vineyard Development (per acre) **	\$35,000	\$25,000	\$25,000	\$25,000
Equipment (per acre)	\$5,000	\$5,000	\$5,000	\$5,000
Total Capital	\$40,000	\$30,000	\$30,000	\$30,000
Term of Returns	Indicative Unlevered Return on Investment (IRR) ***			
15 years	1%	-5%	4%	6%
20 years	4%	0%	7%	9%
25 years	6%	2%	8%	10%
30 years	7%	4%	9%	11%
IRRs are typically calculated "unlevered," i.e., without debt. Debt enhances financial returns.				
* Excludes Land Cost	** w/o Irrigation	*** Excludes Overhead Costs		

Vineyard Scenarios - Considerations

Scenario A – Dense Planting, Organic, Moderate Yields, Higher Pricing

- Financial returns are reasonable
- Higher pricing requires low yields and “precision farming” → higher costs

Scenario B – Typical Planting, LIVE, Moderate Yields, Moderate Pricing

- Financial returns are marginal at low yields (≈ 3 tpa) and low pricing ($\approx \$3,000$ per ton)

Scenario C – Typical Planting, LIVE, High Yields, Lower Pricing

- Financial returns are reasonable even at lower pricing ($\approx \$2,600$ per ton)
- Difficult to average 4.0 tons per acre with Pinot noir at 7' row spacing on VSP trellis

Scenario D – Typical Planting, LIVE, High Yields, Lower Pricing, Larger Scale

- Financial returns are reasonable even at lower pricing ($\approx \$2,600$ per ton)
- Difficult to average 4.0 tons per acre with Pinot noir at 7' row spacing on VSP trellis

Winegrowing Financial Strategy - Considerations

General Considerations – some economic returns are not financial

- Owning and managing a vineyard is a great lifestyle
- Vineyards and wineries are complex, interesting businesses

Options for enhancing financial returns

- Optimize vineyard design
 - vine density, trellis, varieties, rootstock, mechanization
- Vertical Integration – add winery business to vineyard
- Horizontal Integration - achieve scale and increase yields
- Vertical-Horizontal optimization – manage a portfolio
- Specialize - identify a niche market, e.g., small DTC operation
- Diversify – vineyard management, custom crush, other products

End