

# ***Vineyard Cost of Establishment***

**9:30 – 10 a.m.  
Friday March 8<sup>th</sup>, 2019  
Show Me Grape & Wine Conference**



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Midwest Grape & Wine Industry Institute established...9-26-06



# Enology



# Viticulture



IWGA Registered Winemaker & Cellar Worker  
Apprenticeship Program

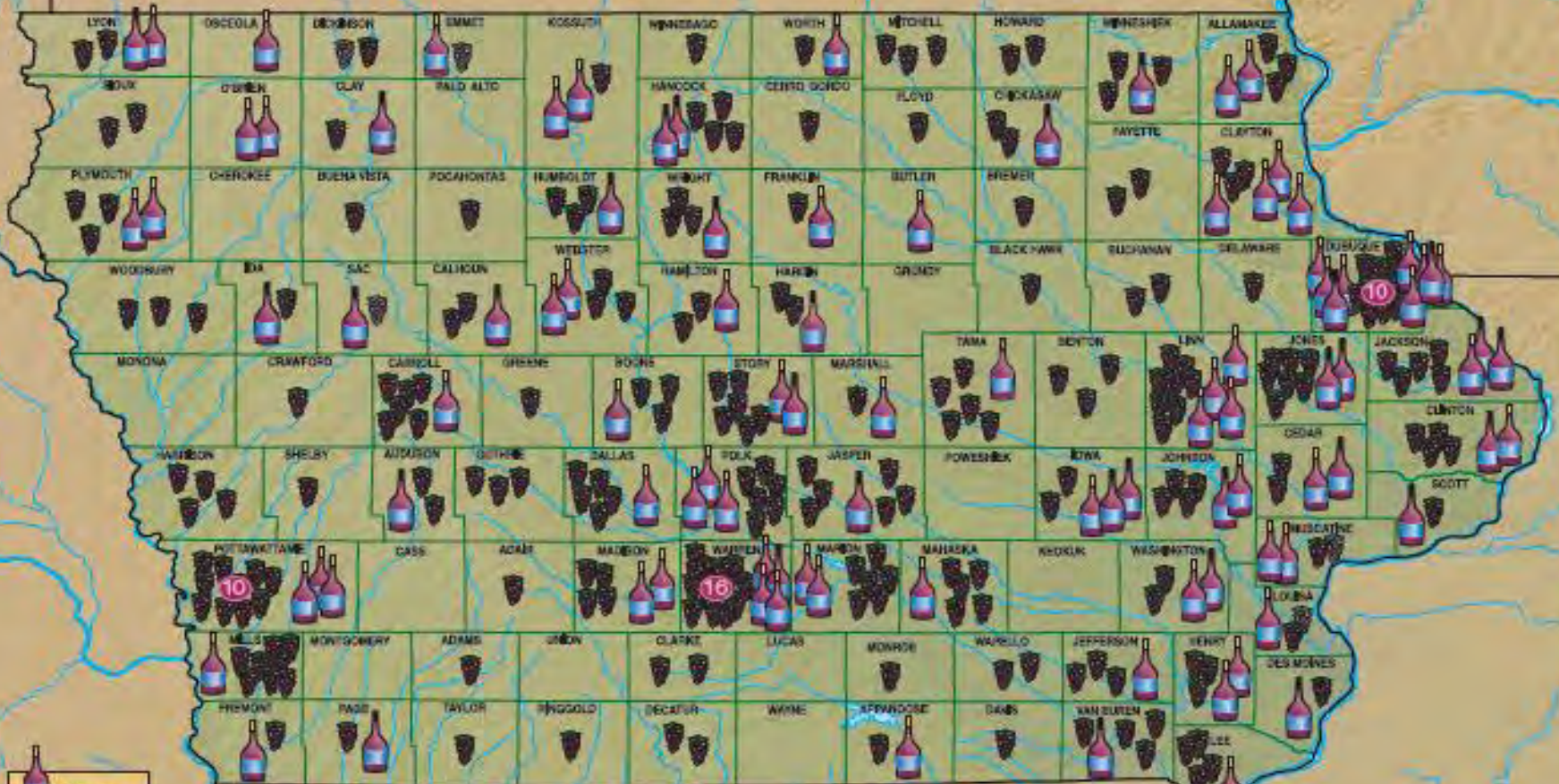
# Research



# Fee-for-Service Lab Analysis



# Iowa Grape Expectations



 Winery  
 Vineyard  
 10 of 7 icons each 100

100 Iowa Licensed Wineries  
247 Commercial Vineyards

Michael L. White, ISU Extension and Outreach Viticulture Specialist

**IOWA STATE UNIVERSITY**  
Extension and Outreach

# Vineyard Math

1 acre = 43,560 sq ft ~ 209' square ~ football field

10' rows x 8' vines = 545 vines/acre = 4,356 linear ft/ac

3.5 ton/ac ÷ 545 vines = 12.8 lbs/vine

12.8 lbs/vine ÷ 0.25 lbs/cluster = 51 clusters per vine

3.5 ton/ac ÷ 19 lbs/5 gal bucket = 368 buckets/ac

40 lbs/lug = 175 lugs/ac

3.5 ton/ac x \$1,200/ton = \$4,200 gross per acre

\$4,200 ÷ 545 vines = \$7.70/gross per vine

175 hrs of labor/ac/yr ÷ 545 vines/ac = 20 min/vine/yr



# Basic Vine/Wine Math

Standard bottle of Wine = 750 ml = 25.6 oz

1 gallon = 3.78 Liters = 5 - 750 ml bottles

12 bottles/case = 2.4 gallons/case

Wooden barrel = (53 to 65 gallons)

Approx. 150 gallons/ton of grapes

3.5 tons/acre ave. yield = 525 gallons/acre

Approx. 545 vines/acre = 1 gal./vine = 13 lbs of grapes

# Year 1 Out of Pocket Costs/Acre

10 – 435' rows 10' x 8' between plants – Single High Wire  
August/September

2 soil samples @ \$20	\$ 40.00
2 qts of Glyphosate@\$14/gal	\$ 7.00
200 lbs of Phosphorous (P205) @ 42¢/lb	\$ 84.00
200 lbs of Potassium (K20) @ 31¢/lb	\$ 62.00
2 tons of Quarry Lime @ \$17/ton spread	\$ 34.00
Disk 2X @ \$18/trip	\$ 36.00
Broadcast 50 lbs of Bluegrass Seed @ \$3.00 lb\$	\$ 150.00
Harrow & level area @ \$10	\$ 10.00

**3-8-19 Approximate**

# Year 2 Out of Pocket Costs/Acre

10 – 435' rows 10' x 8' between plants – Single High Wire

545 plants @ \$3.50	\$1,907
545 - 5/8" x 6' bamboo poles @ 45¢	\$ 245
545 - 36" clipper grow tubes @ \$2.00	\$ 1,090
162 - 3-4"x 8' CCA Blunt line posts @ \$7.00	\$ 1,134
20 - 5-6"x 10' CCA Blunt end posts @ \$15	\$ 300
Approx. 4750' 12.5 ga Hi-Tensile Wire @ 5¢/ft	\$ 238
Fencing tool @ \$130 & Wire puller @ \$80	\$ 210
Spinning Jenny wire holder	\$ 175
20 Ratchet Wire Strainers @ \$3.20 & Ratchet @ \$20	\$ 84
10# of 2" staples (approx. 51/lb) @ \$2.5/lb	\$ 25

**3-8-19 Approximate**

1<sup>st</sup> yr \$423 + 2<sup>nd</sup> yr \$5,408

# Year 2 Out of Pocket Costs/Acre Cont.

10 – 435' rows 10' x 8' between plants – Single High Wire

40 - 12.5 ga. Wire Gripples @ \$1.30	\$ 52
20 – ¾" x 48" long x 6" helix earth anchors @ \$14	\$ 280
20 lbs of 17'/lb. #9 wire @ \$3.50/lb	\$ 70
6,000 #8 - 2 ½" T Bands 6 cents ea.	\$ 360
Max Tapener (\$75) & extra tape & staples (\$20)	\$ 95
Glyphosate /Chateau/Prowl H2O Herbicide	\$ 40

1<sup>st</sup> yr \$423 + 2<sup>nd</sup> yr \$5,408 + 2<sup>nd</sup> yr \$897

**3-8-19 Approximate**



# Year 3 Out of Pocket Costs/Acre

10 – 435' rows 10' x 8' between plants – Single High Wire

Air Blast Sprayer	\$6,000
Portable mounted tank & hand sprayer	\$ 300
Backpack sprayer	\$ 100
Herbicides	\$ 40
Fungicides & Insecticides	\$ 250
Refractometer (Brix Measurement)	\$ 100
pH tester accurate to 0.01 \$175 + Buffers \$30	\$ 205
5,000' -17' med. grade woven bird net @ 25¢/ft	\$ 1,250
15 grape forks for picking @ \$8	\$ 120
100 40lb harvest lugs @ \$12	\$ 1,200

1<sup>st</sup> yr \$423 + 2<sup>nd</sup> yr \$5,408 + 2<sup>nd</sup> yr \$897 + 3<sup>rd</sup> yr. \$9,560



A national information resource for value-added agriculture

## Cost of Establishment Interactive Excel worksheets



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## Grapes

Updated June 2018

### Introduction

Wine may represent the most expensive and creative use of grapes, but it is not the only use. Eaten fresh as table grapes, dried as raisins or



[Single High Wire Trellis](#)  
[VSP Trellis](#)  
[GDC Trellis](#)  
[Winery](#)

<https://www.agmrc.org/>



[Search vineyard or winery worksheet](#)

# GDC, VSP & Single High Wire Worksheets

	A	B	C
1	IOWA STATE UNIVERSITY		
2	University Extension		
3	<b>Cost of Establishing a Vineyard</b>		
4	<b>Funding for this Project was provided by the following:</b>		
5		Leopold Center for Sustainable Agriculture	<a href="http://www.leopold.iastate.edu">www.leopold.iastate.edu</a>
6		Agricultural Marketing Resource Center	<a href="http://www.agmrc.org">www.agmrc.org</a>
7		Iowa State University Extension	<a href="http://www.extension.iastate.edu">www.extension.iastate.edu</a>
8	The Cost of Establishing a Vineyard Workbook has been created to aid in the development of a business plan. The worksheet assumes the user has a good understanding of grape production, marketing, management and cash flow accounting principals. Any results developed by the worksheet should be reviewed by a Certified Public Account for any errors in calculation or assumptions of the user.		
9	Iowa State University assumes no liabilities or guarantees of the success or failure of any business that uses the Cost of Establishing a Vineyard Worksheet as a decision tool in the start of the business.		
10	The workbook is built using Microsoft Office Excel 2003. The workbook is made up of 23 worksheets. Data entered in one worksheet may be linked to other worksheets. Calculations flow through the worksheets automatically. Save often to protect the information entered.		
11	Created by:	Dr. Paul Domoto, Professor of Fruits, Nuts, & Fruit Trees, Iowa State University	
12		<a href="mailto:domoto@iastate.edu">Email : domoto@iastate.edu</a>	
13		Office : 245 Horticulture Hall, Ames, IA 50011	
14		Phone : (515) 294-0035	

Forward | **Instructions** | Assumptions | Labor and Machine Costs | Proposed Vine Spacing | Proposed Line Post Spacing | Proposed Training System | Proposed Vineyard L

start | FileMaker | Iowa Stat... | 2 Micro... | 2 Micro... | Vineyard ... | Microsoft ...

10:38 AM



INCOME DATA	4/1/09	4/1/10	4/1/11	4/1/12	4/1/13
	3/31/10	3/31/11	3/31/12	3/31/13	3/31/14
Number of Statements	113	101	115	87	83
Net Sales	100.0%	100.0%	100.0%	100.0%	100.0%
Gross Profit	100.0%	100.0%	100.0%	100.0%	100.0%
Operating Expenses	83.5%	82.4%	83.7%	77.5%	75.75
Operating Profit	16.5%	17.6%	16.3%	22.5%	24.3%
All Other Expenses (net)	8.0%	8.1%	8.5%	4.65	6.8%
Profit Before Taxes	8.6%	9.5%	7.8%	18.0%	17.5%

Source: Risk Management Association eStatement Studies of Vineyards

Data from 83 to 113 vineyards in the last five years provided by the Risk Management Association

Ag Marketing Resource Center

<https://www.agmrc.org/>



## \$ Value of Grapes in a 750 ml Bottle of Wine

<u>\$Ton</u>	<u>130 gal./ton</u>	<u>140 gal./ton</u>	<u>150 gal./ton</u>	<u>160 gal./ton</u>
\$ 800	\$1.23	\$1.14	\$1.07	\$1.00
\$ 900	\$1.38	\$1.29	\$1.23	\$1.13
\$1,000	\$1.54	\$1.42	\$1.33	\$1.25
\$1,100	\$1.69	\$1.57	\$1.47	\$1.38
\$1,200	\$1.85	\$1.71	\$1.60	\$1.50
\$1,300	\$2.00	\$1.86	\$1.73	\$1.63
\$1,400	\$2.15	\$2.00	\$1.87	\$1.75
\$1,500	\$2.31	\$2.14	\$2.00	\$1.88
\$1,600	\$2.46	\$2.29	\$2.13	\$2.00

\* \$1,200 to \$1,400 predominant price range delivered to a winery in Iowa.

# *I wish I would have made my mistakes on a much smaller scale*

Dave Cushman, Park Farm Winery – Bankston, IA (2008)

