

“Business Plan” – Growers Track

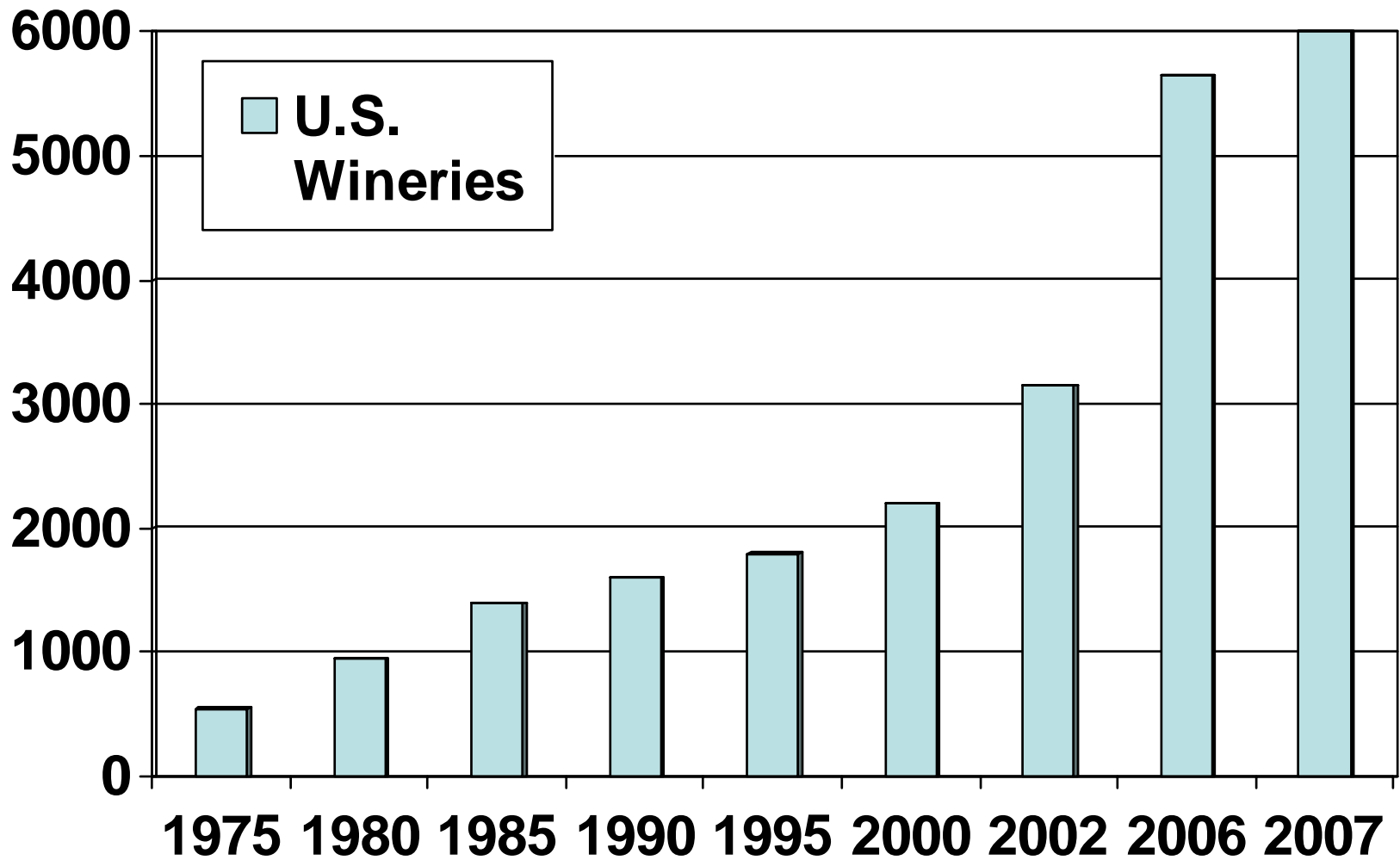


Llamas or Grapes?

You Decide

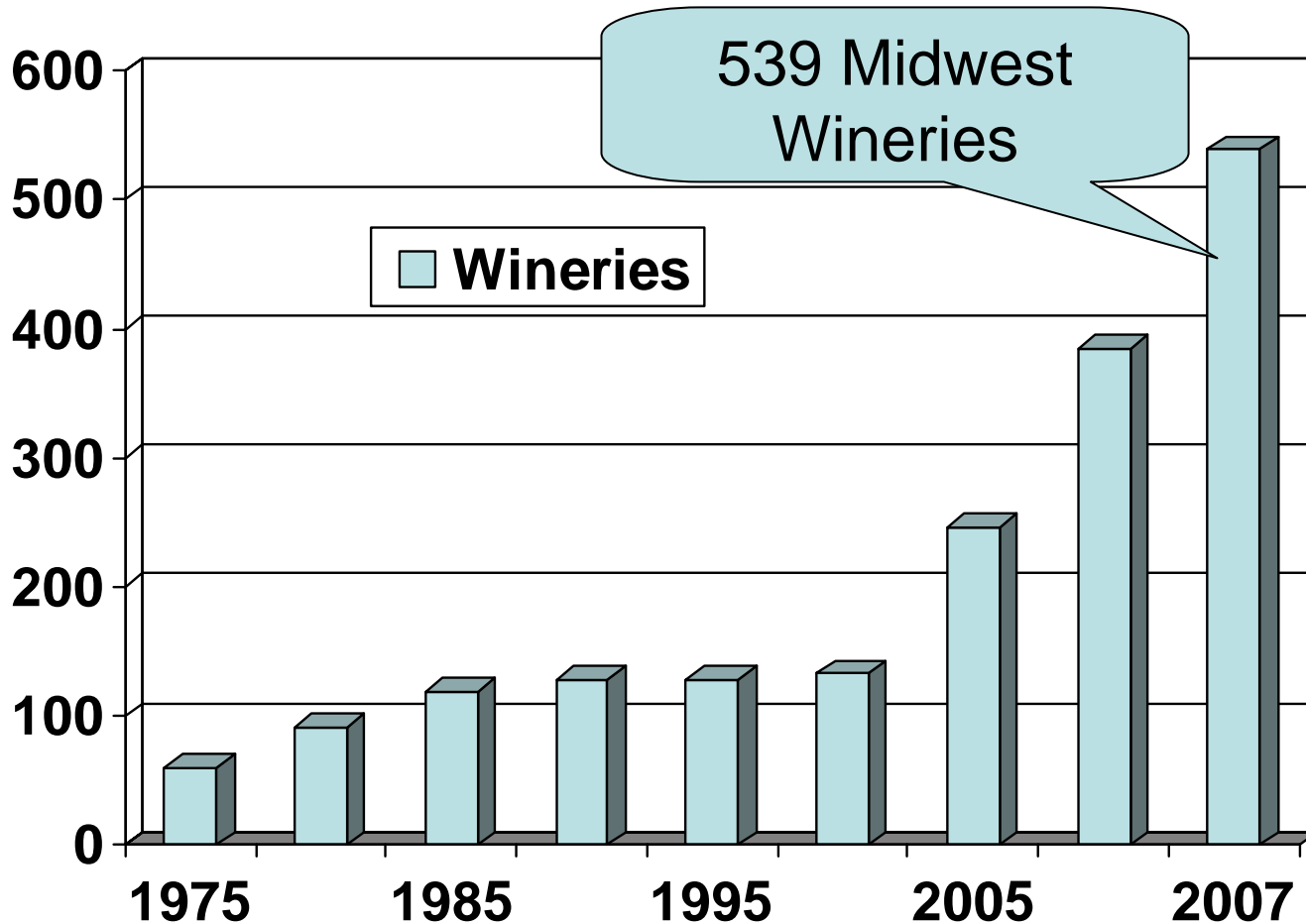
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Viticulture Specialist
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Presented at the
**Minnesota Cold Climate
Grape & Wine Conference**
February 15, 2008

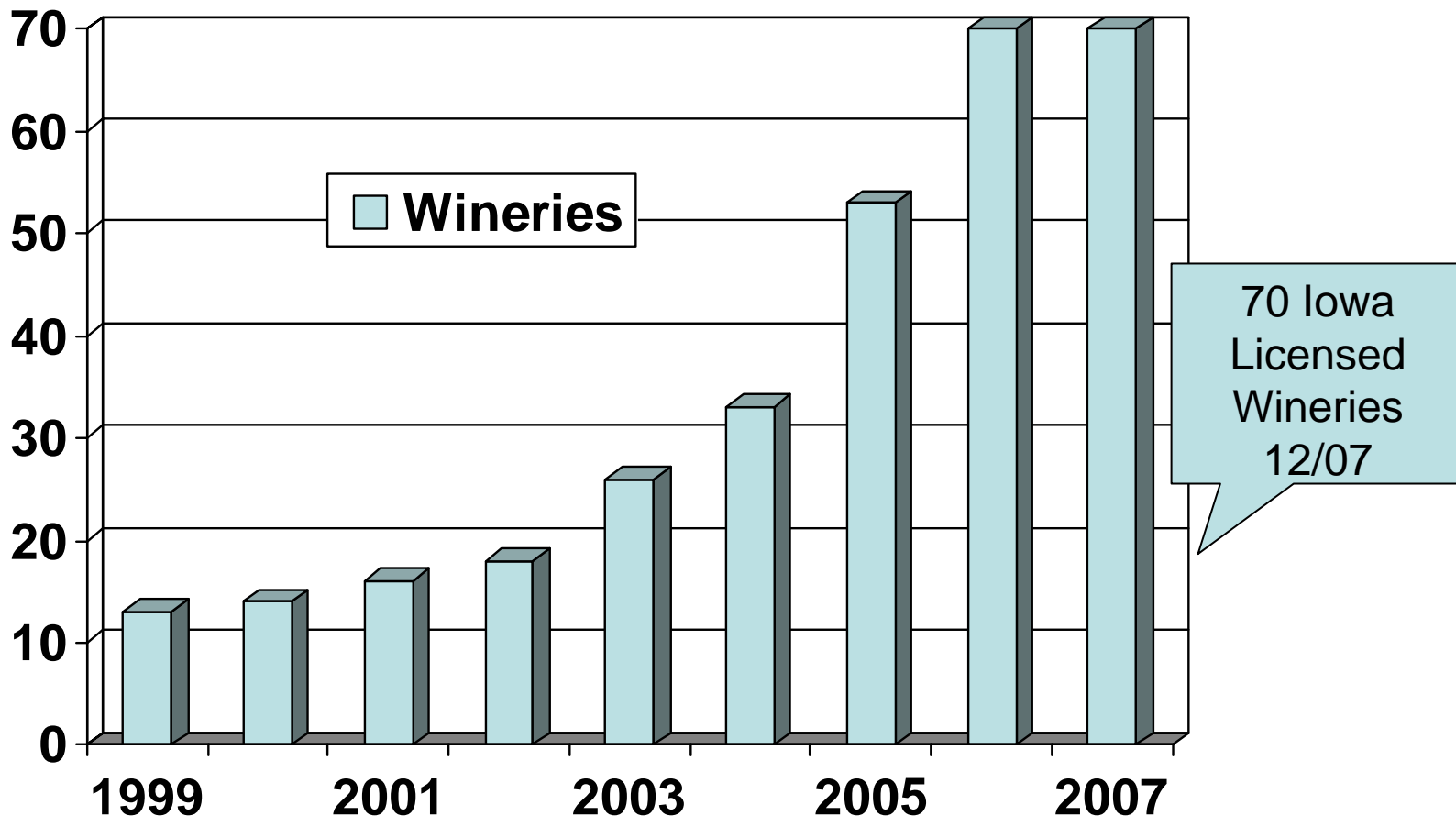


2007 = 4850 bonded + 1,161 virtual = 6,011 wineries

IA,IL,IN, MI, MN, MO,NE,ND,SD,WI Wineries



Iowa Wineries



Vineyard Business Plans

1. Vineyard Business Plan Workbook, 49 p. Southern IL Univ:
<http://www.southernillinois.biz/downloads/vineyardworkbook.pdf>
2. Considerations for Starting a Vineyard, TX A&M:
<http://winegrapes.tamu.edu/grow/start.shtml>
3. Starting a Commercial Winegrape Vineyard, Purdue Univ:
<http://www.hort.purdue.edu/fruitveg/fruit/grapes/starting.pdf>
4. ISU Ag Marketing Resource Center: <http://www.agmrc.org>
Vineyard & Winery Establishment Interactive Excel Establishment
Worksheets:
<http://www.agmrc.org/agmrc/commodity/fruits/wine/wineryfeasibility.htm>
5. Grape Marketing:
<http://www.agmrc.org/agmrc/commodity/fruits/grapes/>

What Kind of Vineyard?



Table Grapes:

U-Pick

Farmers Market

Wholesale to stores

Organic

Juice

U-Pick Self Serve

Hobby Winemaker U-pick



Many Varieties

Sequential Ripening

E-mail Newsletter

5 gal. food grade buckets

Self Serve – U-pick

Manual Crusher- Destemmer

Wine Press

Wash Pad

Self Serve



Winegrape Vineyard

Quality & Quantity Will Determine Income

Consider 5 ton lots ~ 1.5 acres/variety

Refrigerated Storage and/or Reefer Trucks

Sequential Ripening Recommended

Precise Pesticide Records Required

Preharvest
Interval (PHI)

Re-entry Interval
(REI)

Location – Location - Location

South Facing Slope or Ridgeline

Well Drained Soil

Higher Topography to Deter Frost Damage

Good Fertility

pH = 5.5-7.0

P = 25ppm+

K = 125ppm+

Zn = 2-4ppm

2-4% OM%

Stay at Least 100' from Lime Gravel Roads

No Trees within 100' of Vineyard

Seasonal Water Table 4' or Deeper

Out of Site – Out of Mind



Cultivar – Variety - Cultivar

Cold Tolerance

Disease Tolerance

Trellis System

Market Value

Primary Wine Grapes Being Planted in Iowa

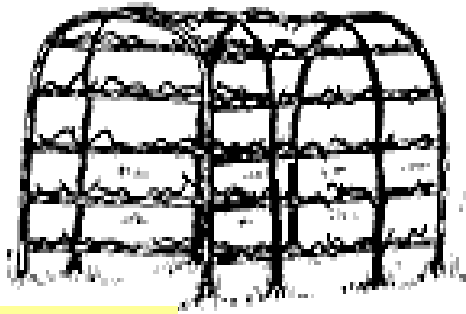
White Grapes

Chardonel, Edelweiss, Frontenac Gris, La Crescent, La Crosse, Louise Swenson, Niagara, Prairie Star, St. Pepin, Seyval Blanc, Swenson White, Vignoles, Brianna, Esprit

Red/Blue Grapes

Catawba, Concord, Norton/Cynthiana, Frontenac, Leon Millot, Marechal Foch, St. Croix, Steuben, Swenson Red, Valiant, St. Vincent, GR-7, Marquette, Noiret, Corot noir, Sabrevois

Many Systems



Arbor

4 cane kniffin

The Four-Cane Kniffin
(courtesy of Michigan State University)
Renewal spurs

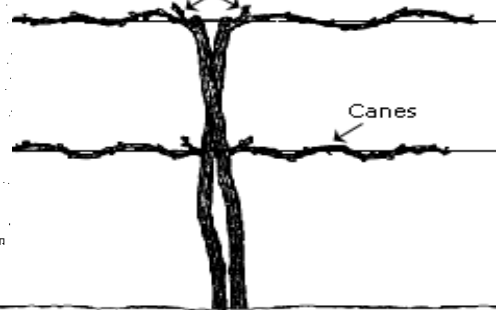
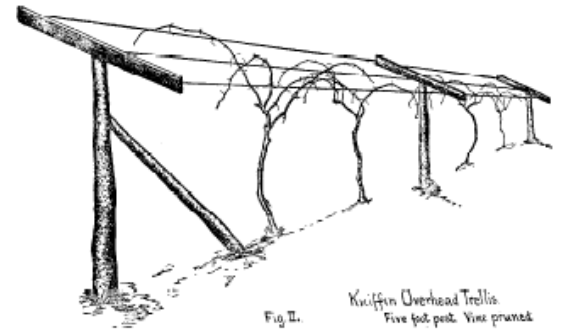
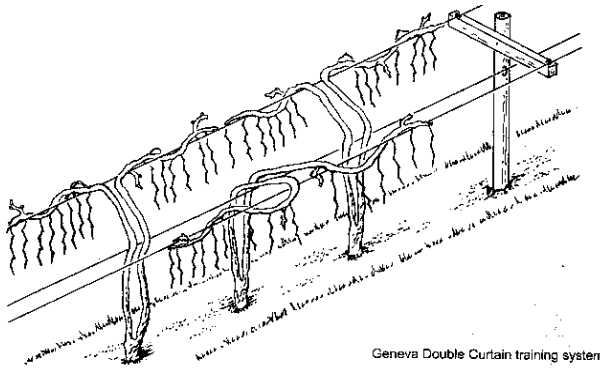


Figure 6.5

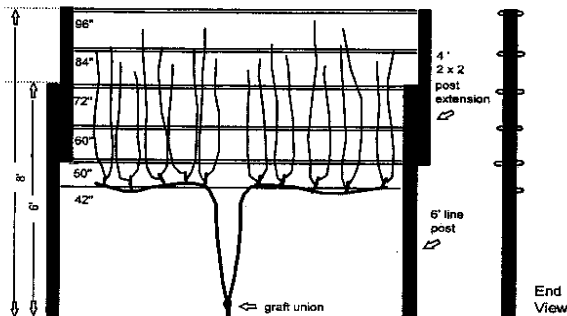


Munson Trellis

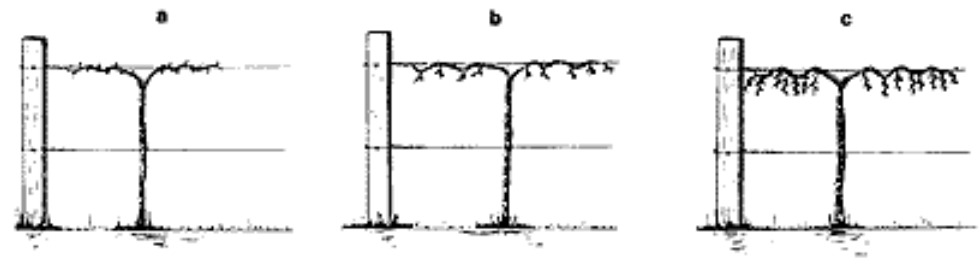


Geneva Double Curtain

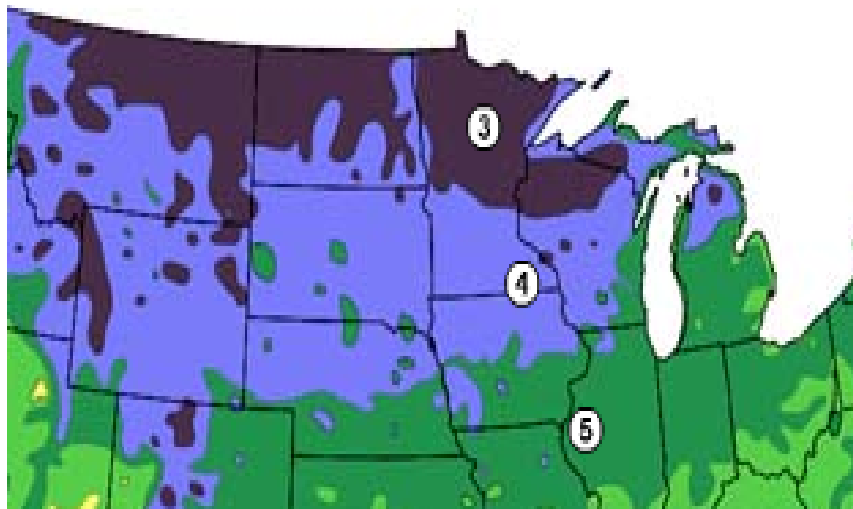
Vertical Shoot Positioned



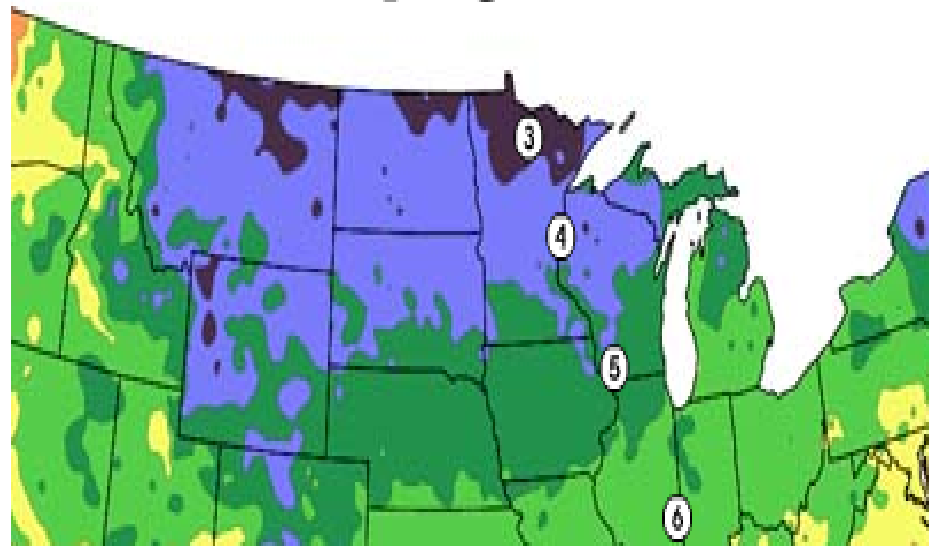
Single curtain, bilateral cordon or high cordon



1990 USDA hardiness zones



2006 arborday.org hardiness zones



Zone 3 = -30F to -40F

Zone 4 = -20F to -30F

Zone 5 = -10F to -20F

Key Components of a Business Plan”

Vision Statement – Business Purpose & Goals

Market Analysis – Facts, Figures, Trends

Business Profile – People, Building, Location, Equipment, Insurance & Legal (licensing, fees, business structure)

Marketing Plan – retail, wholesale,
non-wine or events

Economics – Costs, Sales,
Cash Flow & Financing



Grants – Loans – Tax Credits ***Sources***

- 1. Local Chamber of Commerce & Economic Development Group**
- 2. USDA Rural Development**
- 3. USDA NRCS – RC&D's**
- 4. U.S. Dept. of Energy - DOE**
- 5. Utility Companies & Rural Electric Cooperatives**
- 6. State Departments of Agriculture, Economic Development, Arts & Culture.**
- 7. Google “*Grants*”**

ISU Ag Marketing Resource Center

Vine/Wine Videos

Interactive Winery Excel Worksheet Business Plans

Interactive Vineyard Business Excel Worksheet Business Plans

10.9mm WWW page hits 1st Qtr of 2007

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agricultural marketing resource center

A National Information Resource for Value-added Agriculture

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 - ◇ [Iowa State University, Value-Added Agriculture Extension](#), 1111 NSRIC, Ames, IA 50011
 - ◇ [Kansas State University, Agricultural Economics](#), 305D Waters, Manhattan, KS 66506
 - ◇ [University of California, Agricultural Issues Center](#), One Shields Avenue, Davis, CA 95616
 - ◇ In cooperation with the [United States Department of Agriculture](#)
- ◆ **Publications**
 - ◇ [AgMRC Newsletters - AgMRC Action](#)
 - ◇ [Ag Marketing Resource Center Helping Producers Develop Value-added Strategies](#), Rural Cooperatives magazine, USDA, May/June 2003
 - ◇ AgMRC in the news.
- ◆ **Reports**
 - ◇ [2002-2003 Ag Marketing Resource Center Annual Written Report](#) (pdf)
 - ◇ [2003-2004 Ag Marketing Resource Center Annual Written Report](#) (pdf)
 - ◇ **Quarterly Reviews**
 - [January 1, 2007 to March 31, 2007](#) (pdf)
 - [October 1, 2006 to December 31, 2006](#) (pdf)
 - [July 1, 2006 to September 30, 2006](#) (pdf)
 - [April 1, 2006 to June 30, 2006](#) (pdf)
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If you have a specific question or need help with a problem...

ASK 

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PDFs
Documents are available in PDF format. You must have a current version of Adobe Acrobat Reader to view pdfs. For a free download, click below.



Legend

-  PDF Document
-  Materials developed by the staff of AgMRC

GDC, VSP & Single High Wire Worksheets

	A	B	C
1	IOWA STATE UNIVERSITY University Extension		 LEOPOLD CENTER
2			
3	Cost of Establishing a Vineyard		
4	Funding for this Project was provided by the following:		
5		Leopold Center for Sustainable Agriculture	www.leopold.iastate.edu
6		Agricultural Marketing Resource Center	www.agmrc.org
7		Iowa State University Extension	www.extension.iastate.edu
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		Email : domoto@iastate.edu	
13		Office : 245 Horticulture Hall, Ames, IA 50011	
14		Phone : (515) 294-0035	

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

start | FileMaker ... | Iowa Stat... | 2 Micro... | 2 Micro... | Vineyard ... | Microsoft ... | 10:38 AM

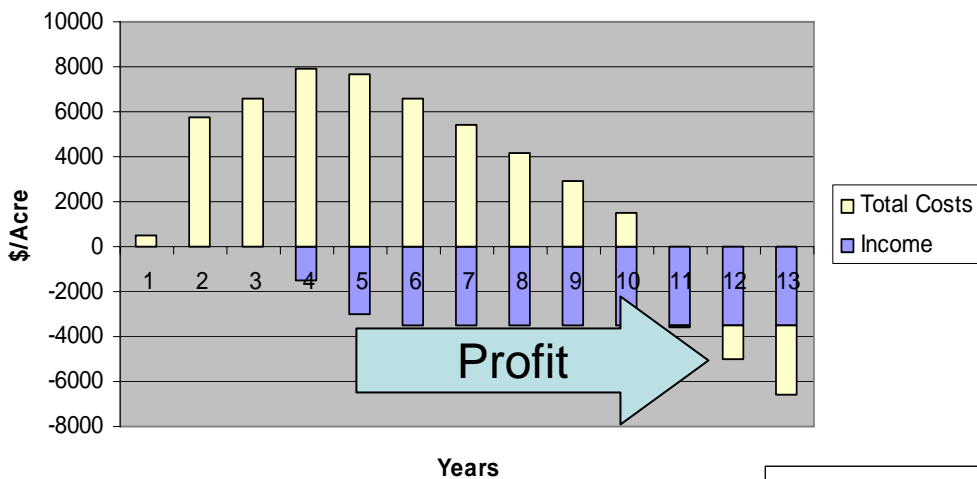
Interactive Excel Worksheets



You put in your own numbers and figure your own costs and income.

System Name	VSP-version 1												
Pre-Plant (Fall prior to planting) Year	Labor			Machinery			Materials			Other Expenses			Total Cost
	Hours	Cost per Hour	Subtotal	Hours	Cost per Hour	Subtotal	Units	Cost per Unit	Subtotal	Units	Costs per Unit	Subtotal	
2005							Materials and Planting Specification Information						
Part Time General Labor		\$6.52		Small Tractor Heavy Tasks	\$10.68		Vines Per Acre	545		Rows per acre	10		
Part Time Trained Labor		\$8.69		Small Tractor Light Tasks	\$8.23		In-Row Vine Spacing in	8		Row Length in Feet	432		
General Labor-Full Time		\$9.81		Large Tractor Heavy Tasks	\$15.25		Line Post Spacing in Feet	24		Vines per Row	54		
Trained Labor-full time		\$14.72		Large Tractor Light Tasks	\$11.75		# Vines between line posts	3		Line Post per Acre	172		
Management		\$25.86					Vineyard Layout	H Brace		End Posts per Acre	20		
Piece Work Labor		\$1.36					Wire Rolls per Acre	7.95		Wires Per Row	7		
Soil Test land where vineyard be located. Two Samples per 2.5 acres at a cost of \$14 per sample or \$5.60/acre. Sample at 0-6" and 6-12".	0.4	\$8.69	\$3.48			\$0.00	2.0	\$5.60	\$11.20	0.0	\$0.00	\$0.00	(\$14.68)
Pre-plant weed control:			\$0.00			\$0.00			\$0.00			\$0.00	\$0.00
CRP or pasture land: Spray the land to kill all vegetation. Apply glyphosate at 5qt/A, plus ammonium sulfate activator to kill perennial grasses and weeds. Glyphosate cost \$13.89/qt (35 Hp tractor, light task) (Labor Hr.=1.0, Machine Hr.=0.4)			\$0.00			\$0.00	5.0		\$0.00			\$0.00	\$0.00

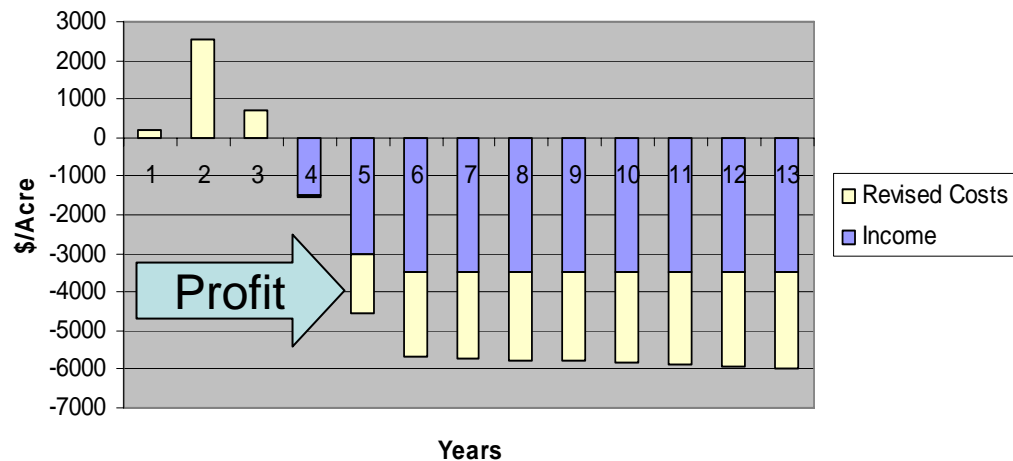
Total Costs vs Income



Assuming General Accepted Accounting Practices. = \$1483.44 Profit in 11th Year after Planting.

Acreage Math Method Where Owner Provides Free Land and 1/2 of Labor and Machinery = \$1,560.18 Profit in 4th Year after Planting

Revised Costs vs Income 1/2 Labor, Machinery, i% and No Land Cost



Out of Pocket Vineyard Costs



Year 1 Out of Pocket Cost/Acre

August/September

2 soil samples @ \$16	\$ 32.00
2 qts of Glyphosate @\$24/gal	\$ 12.00
200 lbs of Phosphorous (P205) @ 60 cents/lb	\$120.00
200 lbs of Potassium (K20) @ 40 cents/lb	\$ 80.00
2 tons of Quarry Lime @ \$14/ton spread	\$ 28.00
Disk 2X @ \$16/trip	\$ 32.00
Broadcast 50 lbs of Bluegrass Seed @ \$2.50 lb	\$ 125.00
Harrow & level area @ \$10	\$ 10.00
Total	\$ 439

Year 2 Out of Pocket Cost/Acre

10 – 435' rows 10' x 8' between plants

545 plants @ \$2.50	\$1,363
545 5/8" x 7' bamboo poles @ 46¢	\$ 273
545 36" clipper grow tubes @ \$1.12	\$ 611
162 3-4"x8' line posts @ \$6.50	\$1,053
20 5-6"x 9' end posts @ \$17	\$ 340
Approx. 4750' 12.5 ga Hi-Tensile Wire @ 23¢/ft	\$1,093
Fencing tool @ \$130 & Wire puller @ \$80	\$ 210
10 Wire Strainers @ \$2.75 & 8# of 2" staples @ \$10	\$ 38
Subtotal	\$4,981

Year 2 Out of Pocket Cost/Acre

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

40 12.5 ga. Wire Gripples @ \$1.76 \$ 71

20 ¾" shank x 48" long x 6" helix earth anchors \$6.45 \$ 129

20 lbs (17'/lb) #9 wire @ \$1/lb \$ 20

6,000 #8 2 5/8" T Bands \$ 264

Max Tapener & extra tape \$ 75

Glyphosate/Chateau/Prowl H2O Herbicide \$ 11

Year 1 \$439 Year 2 = \$5,551 Year 1 & 2 = \$5,990

Year 3 Out of Pocket Cost/Acre

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

Air Blast Sprayer

\$5,000

Herbicides

\$ 33

Fungicides & Insecticides

\$ 180

Refractometer (Brix Measurement)

\$ 100

pH tester accurate to 0.01

\$ 120

4356' 17' 30 gm wt woven bird net @ 34¢/ft

\$1,482

10 grape forks for picking @ \$5.40

\$ 54

100 30' harvest lugs @ \$7.50

\$ 750

Yr 1 \$439 Yr 2 = \$5,573 Yr 1,2 = \$5,990 Yr 3 = \$7,697.00

\$13,709/acre

Total for 3 yrs

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

Winery Math

$3.5 \text{ tons/ac} \times 150 \text{ gal/ton} = 525 \text{ gallons of wine/ac}$

$150 \text{ gal/ton} \times 3.5 \text{ ton/ac} = 525 \text{ gal/ac} = 0.96 \text{ gal/vine}$

$525 \text{ gal} \times 5\text{-}750 \text{ ml bottles/gal} = 2,625 \text{ bottles/ac}$

$0.96 \text{ gal/vine} \times 5 \text{ bottles/gal} = 4.8 \text{ bottles/vine}$

$2,625 \text{ bottles} \times \$10 = \$26,250 \text{ gross/acre}$

$\$26,250 \times \text{ave } 15\% \text{ net return of } \$3,938/\text{acre}$

$\$48/\text{gross/vine}$

(Wine)

$\$7.23 \text{ net/vine}$

When will you start selling grapes?

IL Grape & Wine
2006 Production
Survey of 206
Vineyards & 63
Wineries

Table 4. Time to first sale from year of establishment.

<u>Period in Years</u>	<u>Vineyards</u> *	<u>Wineries</u>
	(%)	(%)
Establishment Year	0.7	42.5
1	2.1	38.9
2	22.0	5.6
3	40.4	7.4
4	20.6	5.6
5	10.7	
6		
7	1.4	
8		
9	1.4	
10 or greater	0.7	
Total	100.0	100.0
Average Period	3.33 years	0.94 years

* Based on reporting vineyards that have sold grapes.

A Typical Year in the Vineyard

Approximately 150-200 hrs/ac/yr

- | | | | |
|-----------|---------------------------|------|---|
| Feb/March | - Prune | July | - 1x spray fungicide |
| April | - Lime Sulfur application | | - 1x spray post herbicide |
| | - 1x mow | | - 1x mow |
| May | - 1x spray insecticide | | - foliar leaf thinning around grapes |
| | - 2x spray fungicide | Aug | - 1x spray fungicide |
| | - 2x mow | | - 1x mow |
| | - 1x spray herbicide | | - petiole testing for fertilizer |
| | - 1x foliar fertilizer | | - begin harvest |
| June | - canopy management | | - Brix/TA/pH testing of grapes |
| | - 1x foliar fertilizer | Sept | - continue harvest |
| | - 2x mow | | - continue Brix/TA/pH tests |
| | - 2x spray fungicide | Oct. | - finish up harvest |
| | | | - continue Brix/TA/pH testing of grapes |

Major Pest Problems Seen In Vineyards

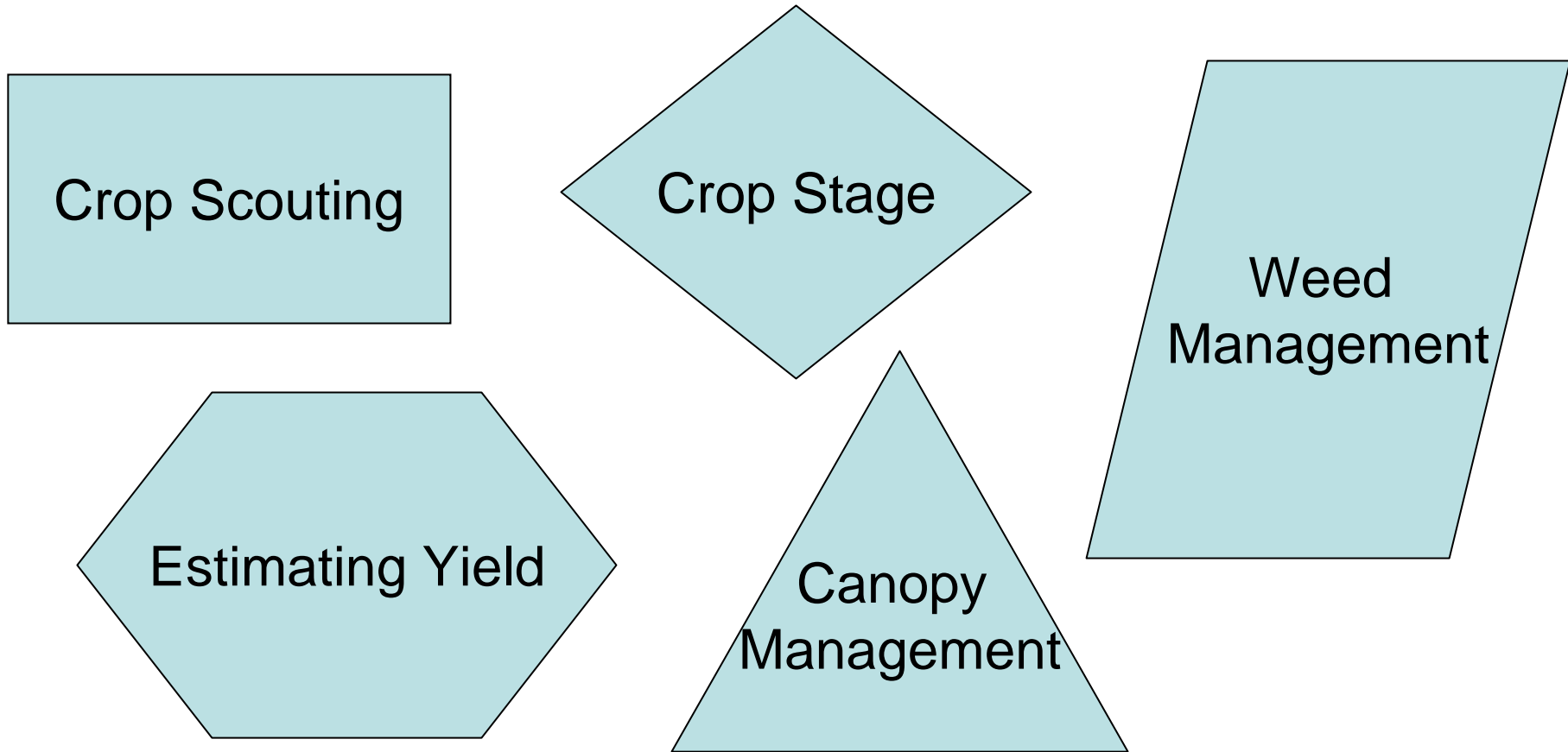
Table 12. Pest management problems cited as most serious by Illinois vineyard owners, ranked by cited frequency (percent).

Problem	Percent *	Problem	Percent *
Birds	13.53	Crown Gall	3.47
Japanese Beetles	12.72	Lady Beetles	3.35
Deer	11.56	Racoons	2.89
Black Rot	7.75	Phomposis	2.54
Annual Grasses	7.40	Grape Berry Moths	2.20
Broadleaves	7.05	Canada Thistle	1.97
Phylloxera	6.71	Woody Plants	1.39
Powdery Mildew	6.36	Bindweed	1.39
Downey Mildew	5.09	Turkeys	1.04

* "Other" pest problems comprise the remaining 1.59 percent of responses.

2006 IL Grape & Wine Industry Survey

Management by Walking Around (MBWA)



Forms of Agriculture used in Vineyards

Conventional Agriculture

Integrated Pest Management (IPM)

Sustainable Agriculture

Organic Agriculture

Biodynamic Agriculture

PHENOXY Drift



2,4-D & dicamba (Banvel)

GRAPES

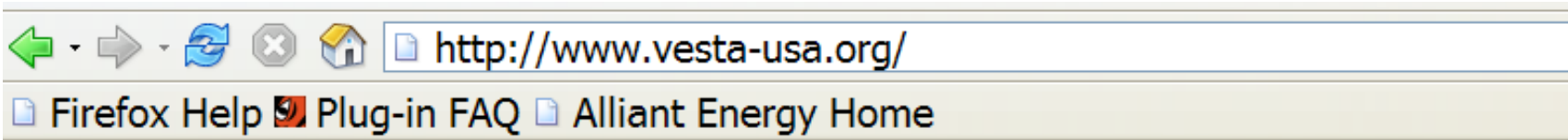
SPRAYING ALERT!

Post Signs

Last but not Least!

Spend your first year visiting as many Midwest Wineries, Vineyards and Vine/Wine Events as you possibly can prior to putting your business plan together.

What you think you know – you don't!



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WELCOME TO VESTA

Enrollment Deadlines:
Fall 2006 courses - August 25, 2006



On-line Viticulture and/or Enology Courses

2 yr degree or 100 hour certification



Viticulture & Enology Program

About this Program

Faculty

Associate Degree

Certificate Programs ▶

Short Courses/Seminars

Events

Return to Programs



DMACC Viticulture & Enology Program

Grape and wine production is increasing in the Midwest and in Iowa especially. Des Moines Area Community College has initiated a viticulture and enology program to serve this growing industry.

What's New/Announcements

DMACC is offering three courses in this program beginning Fall 2007:

- [Introduction to Wine \(VIN150\)](#)
- [Cellar Technology and Operations \(VIN151\)](#)
- [Grape and Wine Science \(VIN149\)](#)

Registration is currently open for "[Introduction to Wine](#)." Registration will soon be open for "Cellar Operations and Technology" and "Grape and Wine Science." Check back soon for more information on these new courses.

More Information

- [Faculty](#)
- [Associate Degree](#)
- [Enology Certificate](#)
- [Viticulture Certificate](#)
- [Short Courses/Seminars](#)
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Iowa State University Extension
Department of Horticulture

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... and justice for all.

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The web site has passed P-1 accessibility standards

Web site design by [Liisa Järvinen](#)

#1 Place to go for Iowa Vine/Wine Information

Midwest Grape & Wine Industry Institute est...9-26-07

THANK YOU



Welcome to the Midwest Grape and Wine Industry Institute!

The Midwest Grape & Wine Industry Institute at Iowa State University was approved by the Iowa Board of Regents in September 2006. The Institute is the first of its kind in Iowa.

The formation of the Institute is a result of the state's evolving grape & wine industry. Dr. Murlu Dharmadhikari, ISU Extension enologist who was hired in 2005, was named director of the Institute.

Goals of the Institute include:

- Conduct research to develop new cold-hardy grape varieties that can thrive in the Midwest
- Conduct enology (the science of wine & wine making) research
- Develop a wine quality award program that will provide wine buyers a quality-assurance stamp of approval
- Establish an outreach program to the industry by training a team of specialists
- Partner with community colleges to develop job training programs specific to growing grapes and making wine

Presently, there are approximately 67 licensed wineries and 325 vineyards in Iowa. The potential economic opportunities in wineries, value-added agriculture and tourism are limitless.

search

Contact

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Phone: 515-294-3308

Fax: 515-294-4362

E-mail:

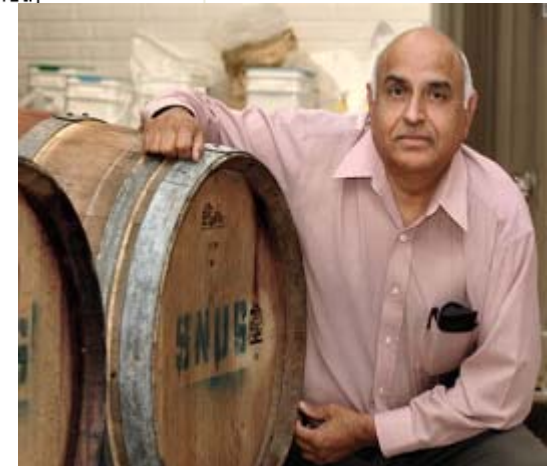
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Monday - Friday

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