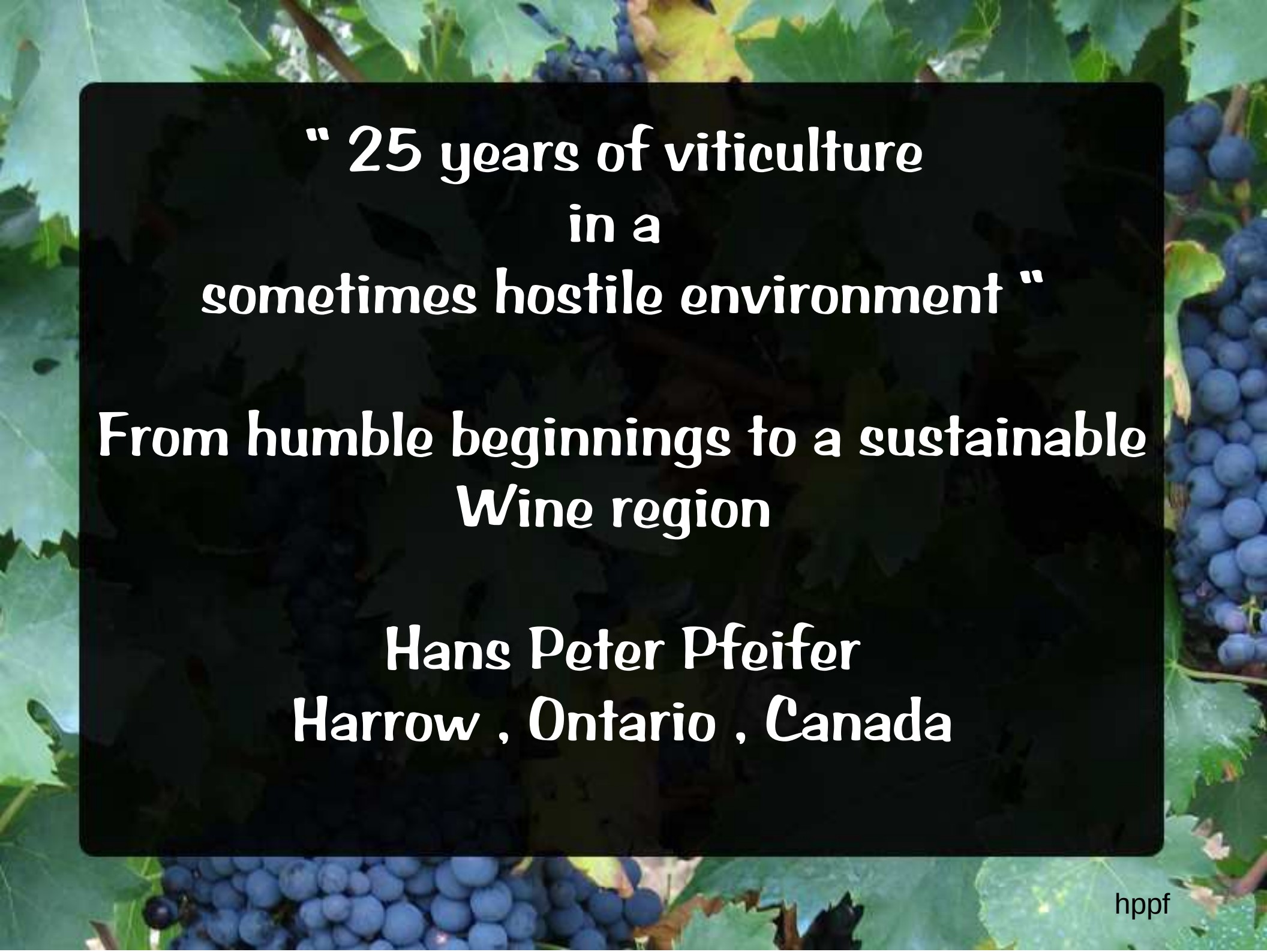
" 25 years of viticulture
in a
sometimes hostile environment "
From humble beginnings to a sustainable
Wine region
Hans Peter Pfeifer
Harrow , Ontario , Canada
hppf

Who am I ???

Hans Peter Pfeifer

Born in Heppenheim

Geisenheim 1976-79

Reinhard Antes

Heinz Freiberger

Walter Bitsch

Moved to Southern Ontario Canada in 1986

Viticulture , Consulting , Teaching , Winery, Sustainability

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PREMIER'S AWARD FOR AGRI-FOOD INNOVATION EXCELLENCE

Award Recipient

www.ontariograpes.com

Hans Peter Pfeifer

- viticulturist -

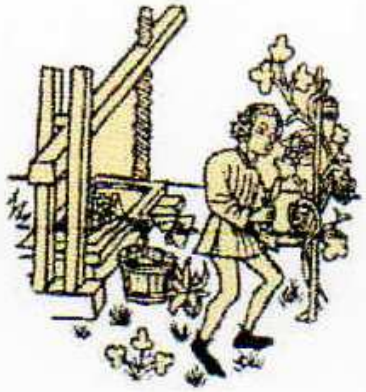
(Diplom Ingenieur Geisenheim)

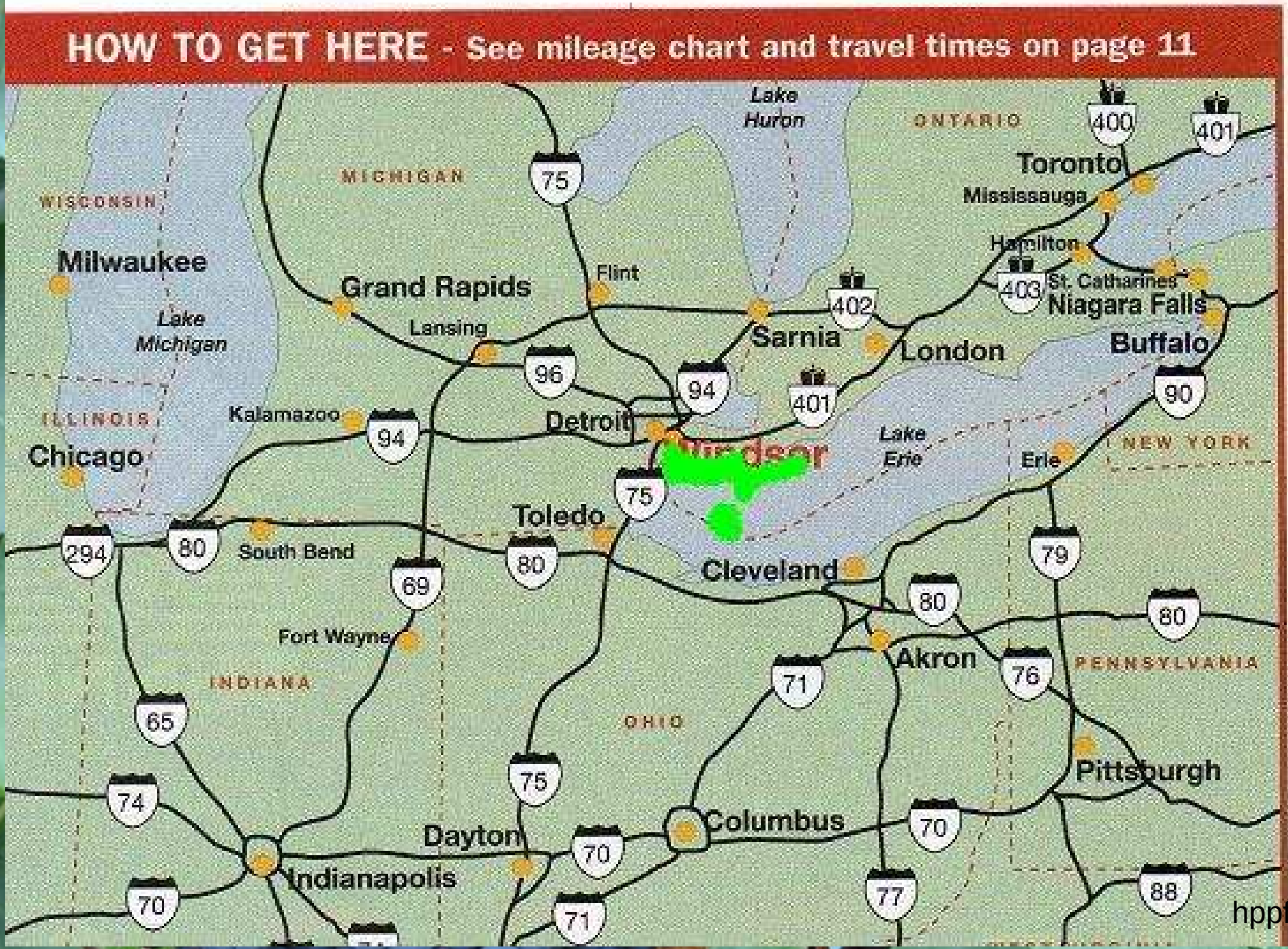
528 County Rd 50 E -RR 1

Harrow ,Ontario , Canada - NOR 1G0

tel.: [redacted]/cell.: 519-792-3638

e-mail : hppf@mnsi.net




HOW TO GET HERE - See mileage chart and travel times on page 11
Lake Huron
ONTARIO
400
401
Toronto
Mississauga
Hamilton
403
St. Catharines
Niagara Falls
MICHIGAN
75
WISCONSIN
Milwaukee
Grand Rapids
Flint
Lake Michigan
Lansing
402
Sarnia
London
Buffalo
96
94
401
90
ILLINOIS
Kalamazoo
94
Detroit
Lake Erie
Erie
NEW YORK
Chicago
75
Toledo
294
80
South Bend
80
69
Cleveland
79
80
80
Fort Wayne
Akron
INDIANA
71
76
PENNSYLVANIA
65
OHIO
75
Pittsburgh
74
Columbus
70
Dayton
70
Indianapolis
77
88
70
71
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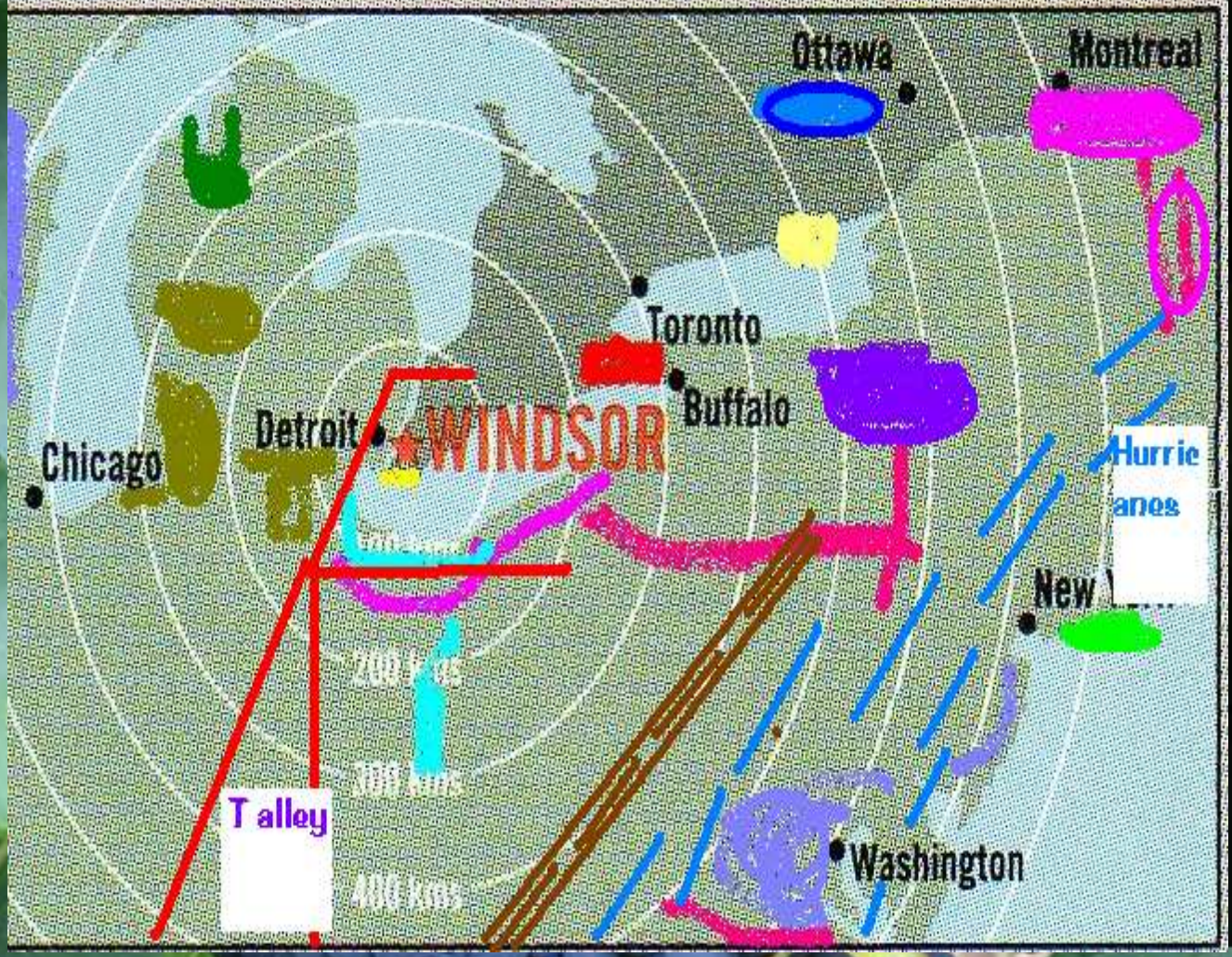
More areas . . similar problems

MILEAGE MAP AND CHART

For specific distances between Windsor and nearby major Canadian and U.S. cities, refer to the chart below



Canada	Miles	Km	Travel Time
London, ON	120	192	1 hr 45 mins
Montreal, PQ	557	891	9 hrs 40 mins
Niagara Falls, ON	240	384	4 hrs 10 mins
Ottawa, ON	500	800	8 hrs 35 mins
Sarnia, ON	67	107	2 hrs 30 mins
Toronto, ON	226	362	4 hrs
United States			
Buffalo, NY	259	414	4 hrs 35 mins
Chicago, IL	284	454	4 hrs 30 mins
Cincinnati, OH	260	416	4 hrs 15 mins
Cleveland, OH	172	275	2 hrs 50 mins
Indianapolis, IN	313	501	5 hrs
Louisville, KY	364	582	5 hrs 55 mins
Milwaukee, WI	376	602	6 hrs 10 mins
New York, NY	614	982	10 hrs
Philadelphia, PA	587	939	9 hrs 30 mins
Pittsburgh, PA	288	461	4 hrs 40 mins

first Winery in Canada on Pelee Island
renewal around 1980

now around 1500 acres of Vineyards

and 14 Wineries including Fruit Wines

official name : L.E.N.S

" LAKE ERIE NORTHSHORE

AND PELEE ISLAND "

Or short : Windsor/Essex

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SOUTHWESTERN ONTARIO WINE ROUTE
DETROIT
TUNNEL
BRIDGE
WINDSOR
TECUMSEH
Lake St. Clair
CHATHAM
BELLE RIVER
TILBURY
BLENHEIM
ESSEX
AMHERSTBURG
WHEATLEY
LEAMINGTON
CON. 3
HARROW
KINGSVILLE
POINT PELEE
PELEE ISLAND
Lake Erie
96
10
94
75
22
3
19
401
20
11
77
1
8
40
5
27
9
10
16
23
31
34
20
13
50
A
B
C
D
E
F
G
H
I
J
K
L
M
COME FOR THE Wineries.
Experience THE REGION.
SOUTHWESTERN ONTARIO
VINTNERS
EST. 1991
ASSOCIATION
WWW.SWOVINTNERS.COM

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The only area in Canada located south of

the 42 nd parallel

= southern Italy and Spain

= North California

Part of the world's largest fresh water system

"the Great Lakes Basin "

The Growing Season

Frost free period	192 days
GDD	1480
Rainfall	816 - 942 mm (60% from April-October)

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Farm data from Harrow

Winter : 2 x <-15C / 3x -15-20C / 1x<-30C
8x-20-25C/4x-25-30C

Spring frost : 1998 and 2002 , once frost in June

Bloom : first 2 weeks in June (May 30 - June 23)

GDD : average last decade 1523 (1325 - 1716)

Rain : may come in up to 4 " in one event ,followed by intense heat ~ 30 C
Ozone damages of leafs more often

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Some very important questions :

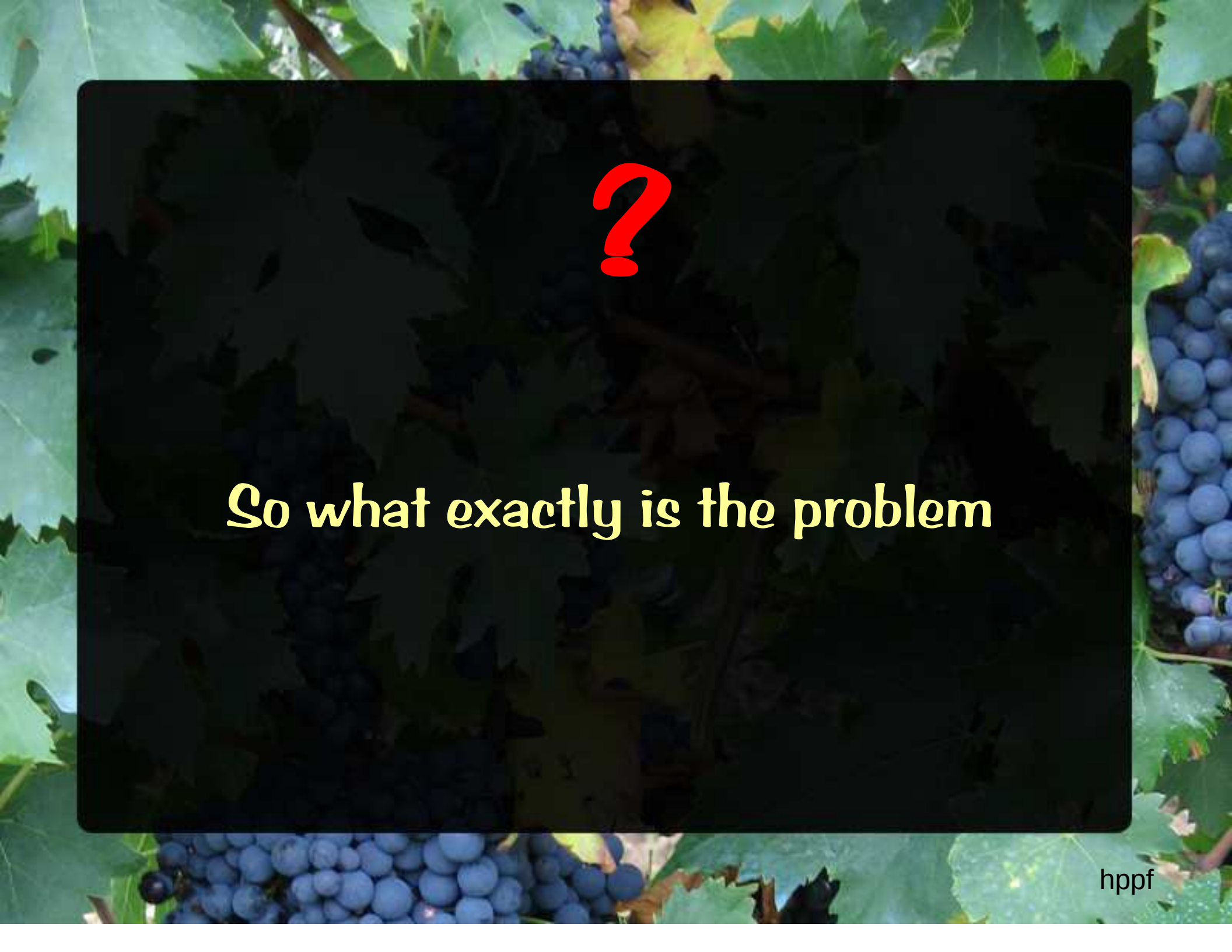
What sort of climate are we dealing with ??

What varieties can /should be used ?

What influences the performance ??

How do we grow them ??

How can we help them to enhance performance ??


?
So what exactly is the problem

....going in the winter !

....going through the winter !

....coming out of the winter !

.....spring frost not a big problem !

Once it grows we can manage .....

Key Publications :

I. Publication from Michigan State University

E 2930 "Winter Injury to Grapevines and Methods of Protection"

106 pages 15 $ US

(a 44 page summary is attached as pdf.file)

II. Publication : CanAdvance Project #ADV-161 (GGO,WCO,)

Reducing Cold Injury to Grapes Through the Use of Wind Machines

32 pages

(attached as a pdf.file)

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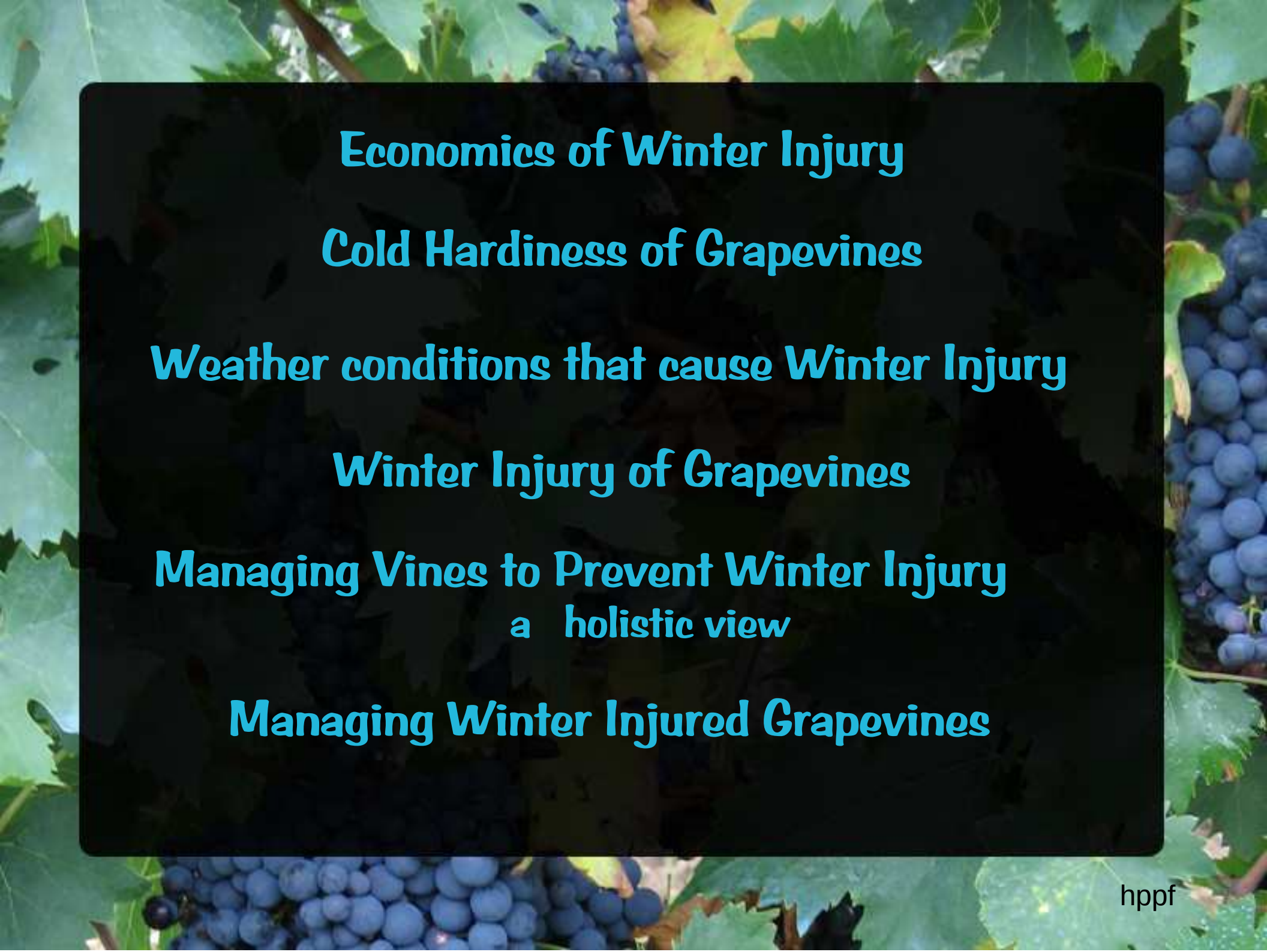
Economics of Winter Injury
Cold Hardiness of Grapevines
Weather conditions that cause Winter Injury
Winter Injury of Grapevines
Managing Vines to Prevent Winter Injury
a holistic view
Managing Winter Injured Grapevines
hppf

Economics of Winter Injury

Economic losses

Risk management

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Cold Hardiness of Grapevines

Definition

Seasonal changes in vine physiology

Seasonal changes in vine anatomy

Genetics : variations among Grape Genotypes

Weather conditions that cause Winter Injury

Duration of exposure to a low temperature

Rapid temperature drops

Temperature preceding cold episodes

Repeated cold episodes

Desiccation

Local and regional climate effects

Managing Vines to Prevent Winter Injury

Vineyard site selection and preparation
Choice of planting material and training system
Influence of vine architecture on injury
Influence of shoot orientation
Pruning and crop control
Vine density
Chemical applications to influence injury
Insect and disease control
Avoiding low temperatures
Nutrition
Leaf removal
Rootstock
Time of Harvest
Irrigation
Row middle management

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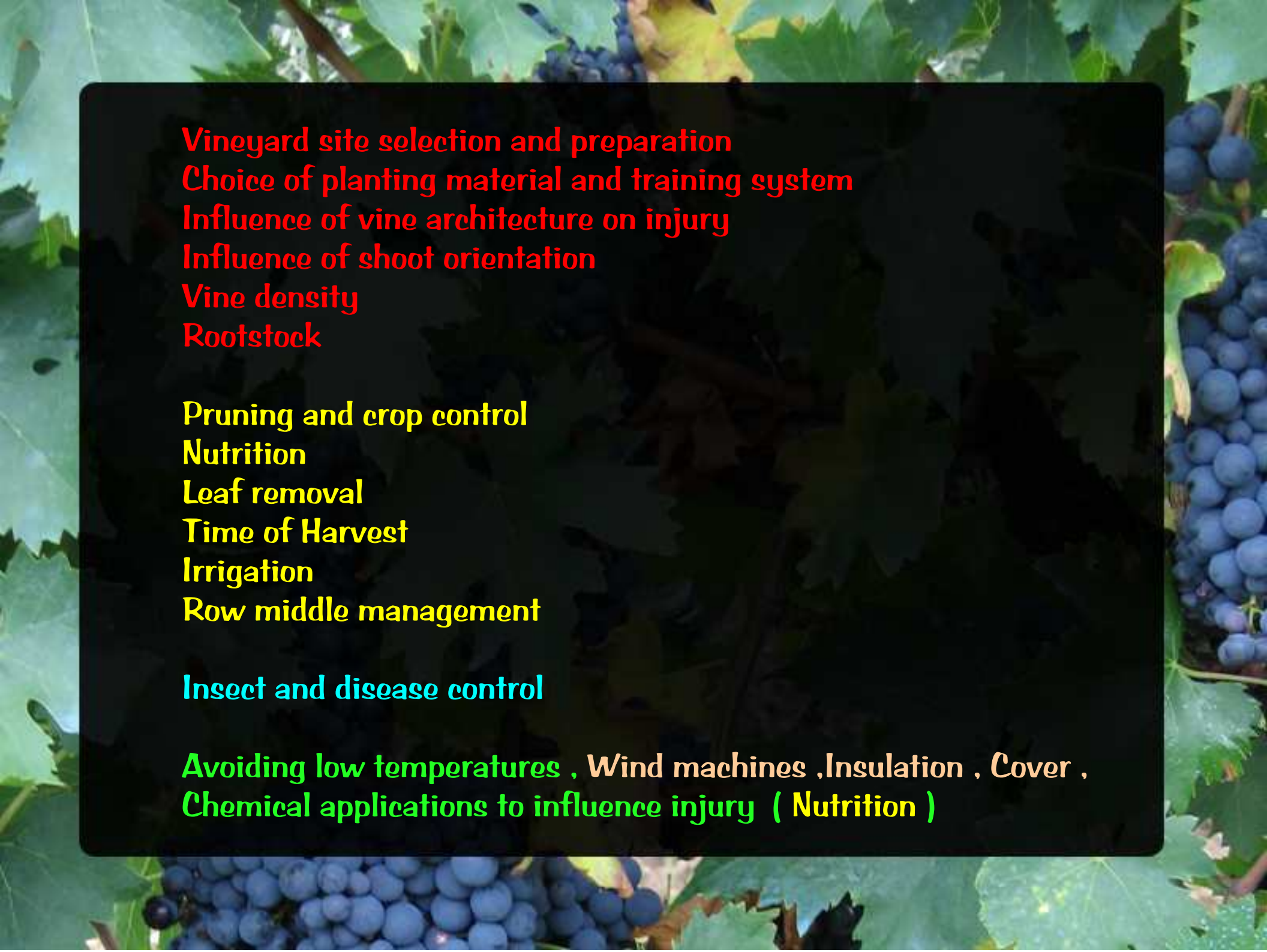
Vineyard site selection and preparation
Choice of planting material and training system
Influence of vine architecture on injury
Influence of shoot orientation
Vine density
Rootstock
Pruning and crop control
Nutrition
Leaf removal
Time of Harvest
Irrigation
Row middle management
Insect and disease control
Avoiding low temperatures , Wind machines ,Insulation , Cover ,
Chemical applications to influence injury (Nutrition)

Managing Winter Injured Grapevines

Processes of repair in injured trunks and canes

Replant

Pruning and tying strategies in relation to severity

Suckers

N N N N N

Cropping ? ? ?

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Technology of the Future

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Frost Patterns

From Oct. 5 18:00

To Oct. 6 12:00

Ridgetown College, University of Guelph

"Winter Freeze Damage and Springfrost Ratings "

Dr Helen Fisher UoGuelph

Variety	Winter Freeze Damage (rating 1-10*)	Spring Frost (rating 1-5**)
Aurore	8	3
Auxerrios	3 5	3
Baco Noir	8	1
Cabernet Franc	5	5
Cabarnet Sauvignon	3	5
Cayuga White	8	2
Chambourcin	7	5
Chardonnay	5	3
Concord	10	2
De Chaunac	9	3
Elvira	10	2
Fredonia	10	2
Gamay Noir	5	5
Gewürztraminer	3	5
Geisenheim 318	8	5
Leon Millot	10	1
Limberger	3	5
Ma fechal Foch	10	1
Merlot	2	4
Nebbiolo	1	?
Niagara	8	2
Petit Sirah	1	?
Pinot Blanc	3	5
Pinot Gris	3	5
Pinot Noir	3	5
Riesling	5	5
Sauvignon Blanc	1	5
Seyval	8	4
Sovereign Coronation	9	3
Vidal	8	5
Zinfandel	1	?

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Add on to list :

- Perle von Alzey
- Ortega
- Breidecker
- Hibernal

Regent

Trials with Lagrein , Carmenere , Morvedre ,
Nebbiolo , Petite Verdot ,etc , etc

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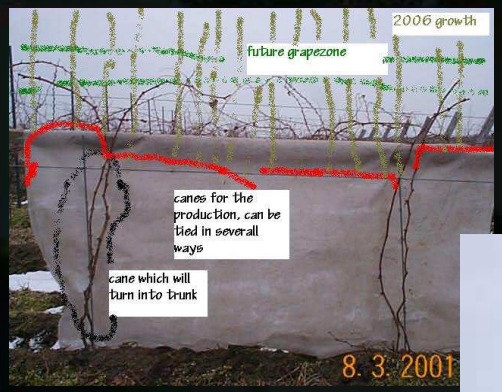
Learning by doing .....

Or

If it doesn't work, try ,try and try again
(and different)

Multiple trunks of different ages



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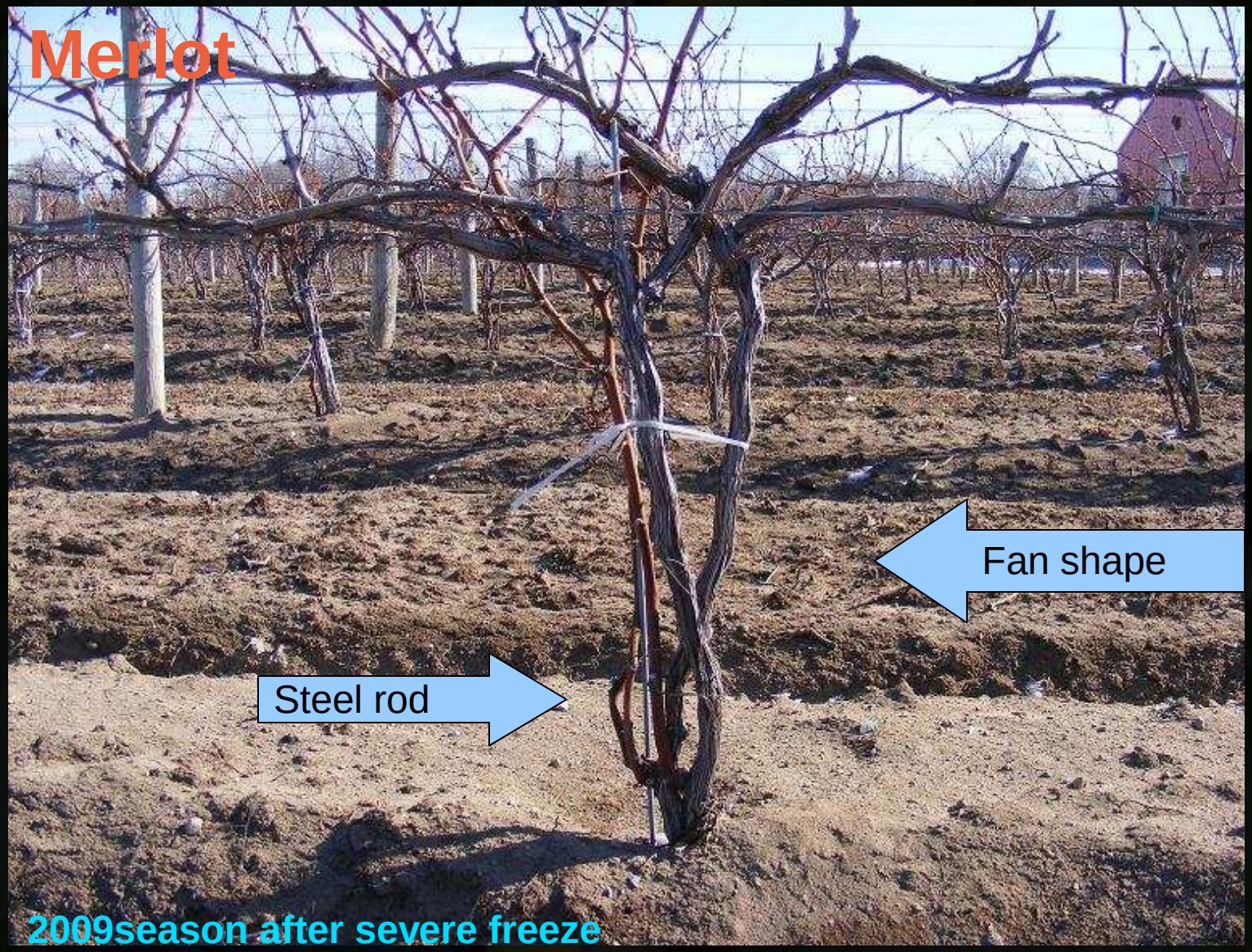

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"real "hilling up"

Mulch /Straw Cover

hppf

hppf

hppf

1994
February -27 C

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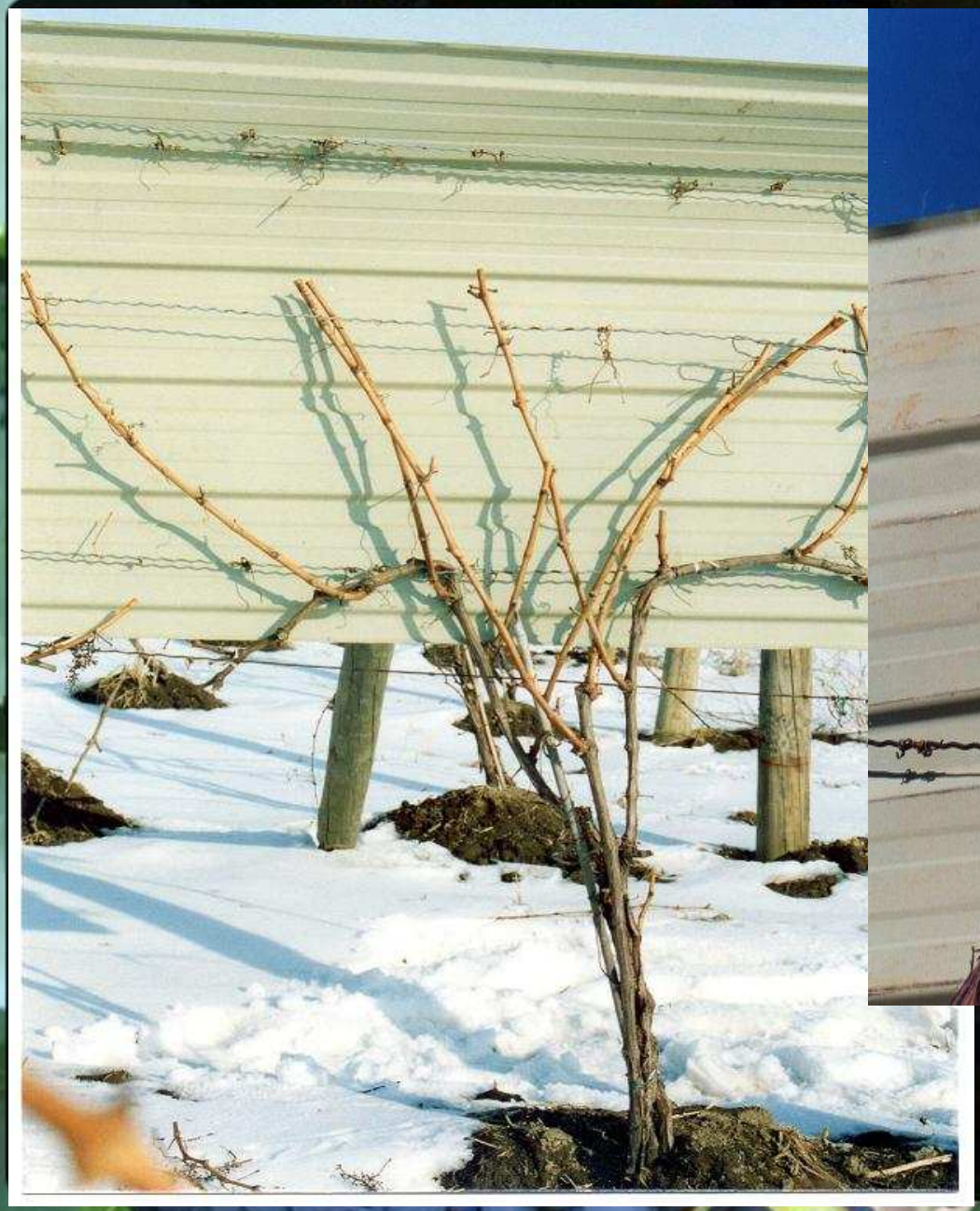

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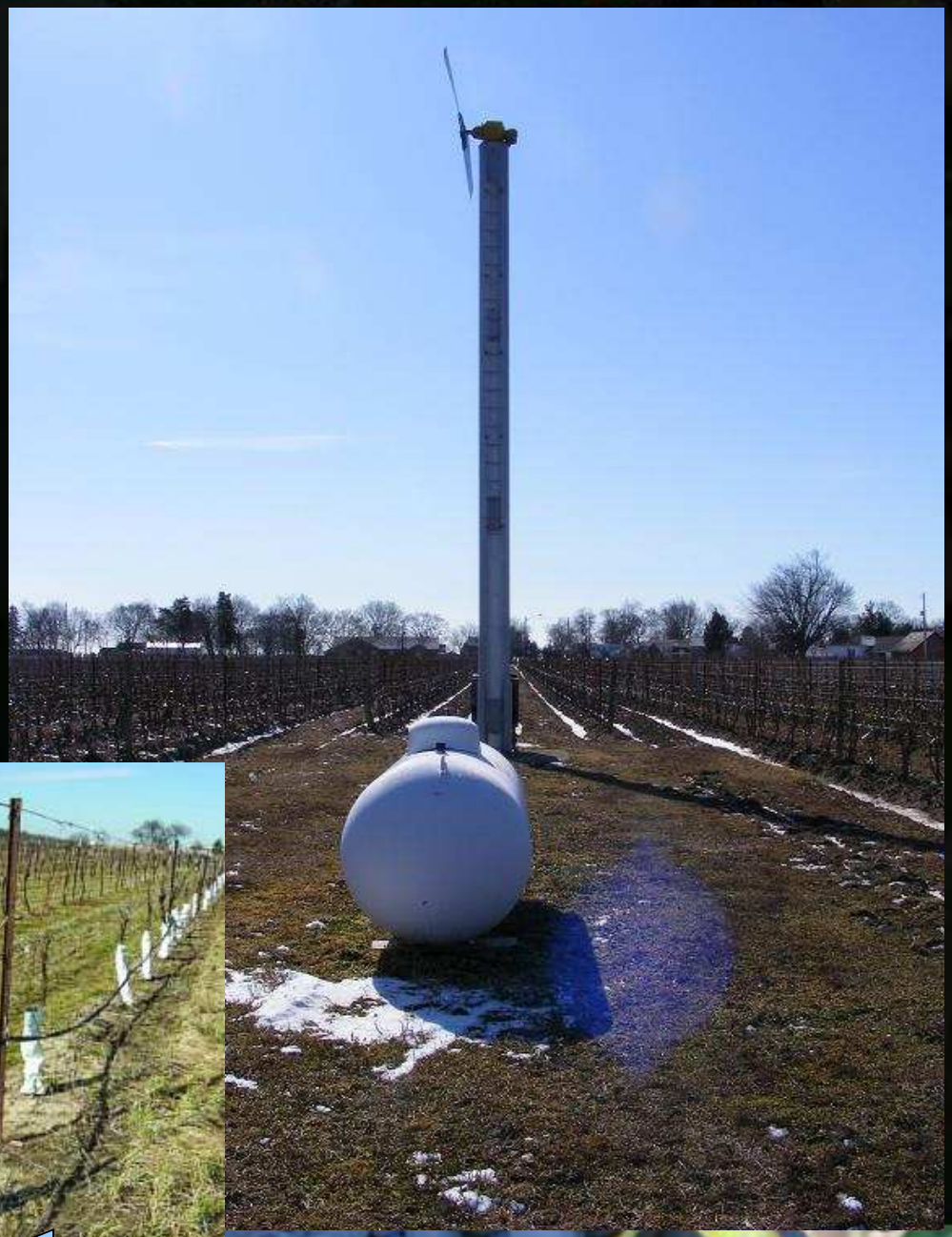

Heating blanket

added safety
and
Insurance

for clear nights
without wind and low
humidity (extreme
low dew points)

Only good up to
12 km/hr wind

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.... and now to the rest of the growing season !!

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And even during

pruning it can get

very cold at night

(no harm done)

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Tornado touchdown

and hail

Pea to Blueberry size for

15 minutes

September 6, 2006

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Heat stress and Ozone damage more frequent

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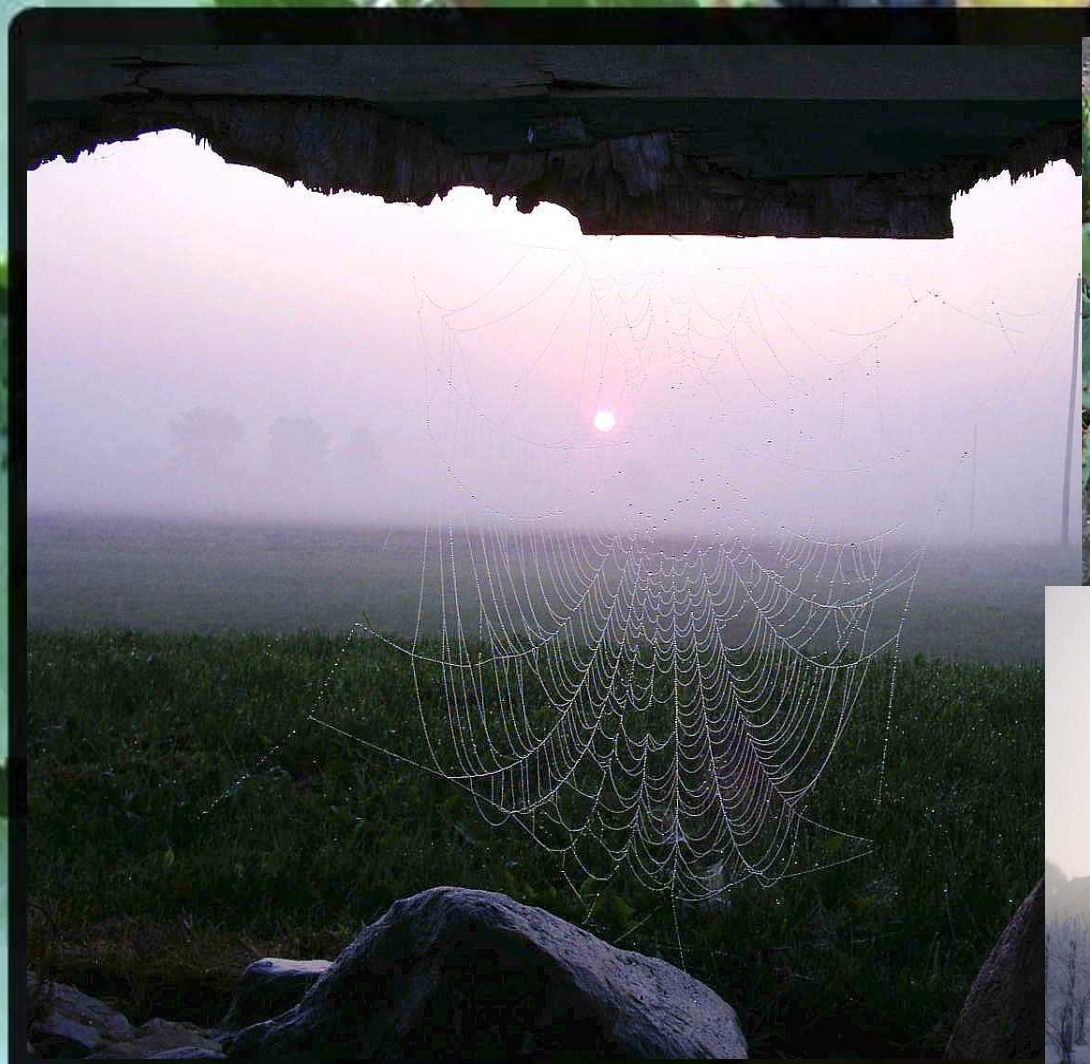

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Ice wine almost every year possible

hppf

Thank you so far ....

Info in books

- Climate by David Jackson ISBN -0-909049-35-1

- "The Production of G rapes and Wine in Cool Climates"
David Jackson & Danny Schuster ISBN -0-909049-17-3

Web searches ; Michigan State University - viticulture/grapes
Cornell , Geneva ,New York - cold climate

Websites : www. littlefatwino.com
www.northernwinework.com
www. amarillowind.com
www.orchard-rite.com
www. shurfarms.com

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Following is a list of grape publications currently available: from MSU

CD007, Wine Grape Varieties for Michigan and Other Cold Climate Viticultural Regions, $10.00

E2642, Table Grape Varieties for Michigan, 16 pages, $2.00

E2643, Wine Grape Varieties for Michigan, 24 pages, $4.00

E2644, Vineyard Establishment I - Preplant Decisions, 40 pages, $5.50

E2645, Vineyard Establishment II - Planting and Early Care of Vineyards, 40 pages, $8.00

E2698, Pest Control in Small Vineyards (Grape), 16 pages, $2.00

E2759, Fruit Crop Ecology and Management, 108 pages, $16.00

E2774, Growing Table Grapes in a Temperate Climate, 48 pages, $7.00

E2889, A Pocket Guide for Grape IPM Scouting in North Central and Eastern U.S., 122 pages, $14.00

E2930, Winter Injury to Grapevines and Methods of Protection, 106 pages, $15.00

www.emdc.msue.msu.edu

Additional Information

pdf.files with 2 Key - Presentations

Proceedings from other seminars as pdf.files

Advertising material from WM-manufacturers

Magazines ,trade magazines , publications from Ontario

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