



nsc***c***

STRIVE

QUALITY SKILLS DEVELOPMENT: FROM VINEYARD TO WINEMAKING TO TOURISM AND RESEARCH

HISTORY & BACKGROUND

- Project initiated in 2007
- Guided by NSCC Grape/Wine Advisory Committee (PAC)
 - Perennia
 - Dept. of Agriculture
 - Winery Association of NS
 - Grape Growers Association of NS
- Industry surveys conducted
- Development of grape growing & winemaking courses
- Strategic Alliance with Niagara College

GRAPE GROWING COURSE OFFERINGS

Introduction to Grape Growing

This course introduces a variety of topics intended to cover competencies required to plan, design, plant and maintain a vineyard in Nova Scotia. Topics covered include:

Vineyard Planning and Development: Importance of proper site selection and planning required to develop a NS vineyard.

Planting, Trellis Design, Pruning and Canopy Management: Demonstrations and field trips - will provide current practices and methods for planting and maintaining a Nova Scotia vineyard.

Integrated Pest Management: Various pests and beneficial species in NS vineyards and the management procedures used for control.

Harvest and Processing: Will define the term "quality wine grape" and the relationships between sugar, acid, and pH levels during the grape ripening phase.



Class Details:

Class #:	Instructor: Patrick Cantieni
Campus: NSCC Kingstec Campus, 236 Belcher St., Kentville, Nova Scotia	Materials: not applicable
Dates: Jan 15 – Apr 9, 2015	Duration: 36 Hours
Time: Thursday 6:00 PM – 9:00 PM	Cost: \$403

To Register:

By Phone | NSCC Admissions

Speak to us in person:

8:00 AM to 5:00 PM Monday - Thursday

8:00 AM to 4:00 PM Friday

Toll-free 1-866-679-6722

Hearing Impaired Service

TTY in Metro - 491-5509

TTY Outside Metro Area - 1-866-288-7034

In Person

Register at a campus near you

8:00 AM – 4:00 PM, Monday to Friday

For the most up-to-date course schedule and the complete course details, visit:

www.coned.nscc.ca

- Introduction to Grape Growing in Nova Scotia
 - First offered in winter 2009
- Intermediate Grape Growing – 5 modules
 - Canopy Management & Weed Control
 - Wildlife Protection & Harvest
 - Pruning & Training
 - Propagation & Vineyard Establishment
 - Integrated Management of Diseases & Insects

WINTER 2015

Continuing Education

Part-time • Evenings • Weekends • Online

nscc

STRIVE. **nscc**

WINEMAKING COURSE OFFERINGS

Niagara College Winemaking

Learn how to make wine from the most experienced and award-winning winemaker in Nova Scotia!

Bruce Ewert has over 25 years of experience and will facilitate internationally recognized curriculum from Niagara College.

Learn about the equipment, fundamentals, process, testing and analysis involved in winemaking. The course will blend conventional and organic winemaking approaches including traditional-method sparkling in a variety of learning venues, including L'Acadie Winery. You will be challenged to plan your own vintage in a group project and enjoy the fruits of your labour.



Class Details:

Class #:	Instructor: Bruce Ewert
Campus: NSCC Kingstec Campus, 236 Belcher St., Kentville, Nova Scotia	Materials: not applicable
Dates: Jan 13 – Apr 21, 2015	Duration: 36 Hours
Time: Tuesday 6:00 PM – 9:00 PM	Cost: \$464

To Register:

By Phone | NSCC Admissions

Speak to us in person:

8:00 AM to 5:00 PM Monday - Thursday

8:00 AM to 4:00 PM Friday

Toll-free 1-866-679-6722

Hearing Impaired Service

TTY in Metro - 491-5509

TTY Outside Metro Area - 1-866-288-7034

In Person

Register at a campus near you

8:00 AM – 4:00 PM, Monday to Friday

For the most up-to-date course schedule and

the complete course details, visit:

www.coned.nscc.ca

- Niagara College Winemaking
 - First offered in winter 2014
- Replaced with Introduction to Winemaking

WINTER 2015

Continuing Education

Part-time • Evenings • Weekends • Online

nscc

STRIVE. **nscc**

NSCC EDUCATIONAL VINEYARD

- Established in 2014
- 1+ acre in size
- Living Lab for students and industry
- 5 hybrid varieties
 - Leon millot
 - Marechal foch
 - New York Muscat
 - Vidal blanc
 - L'Acadie blanc



NSCC EDUCATIONAL WINERY

- ACOA funding: Investing in Atlantic Canada's industry
- 1,800 square foot industry-specified facility
- 2,500L tank capacity
- Set-up for still, sparkling and cider
- Wine analysis laboratory for all standard testing
- Construction completed in 2015



Fermentation Room



Bottling Station



Wine Lab

COOL CLIMATE WINE AND VITICULTURE

- Delivery commenced January 2019
- Grape growing, Winemaking, Sales/Promotions
- 4 Semesters: January – December 2019
- 3 Work Integrated Learning courses, progressive skill development/length:
 - April 1 - 18 – 3 weeks
 - June 24 - July 26 – 5 weeks
 - September 30 - November 8 – 6 weeks
 - Progressive skill development & contact length
 - Placements throughout Atlantic Canada

COOL CLIMATE WINE AND VITICULTURE

■ Courses:

- Biology for Viticulture
- Introduction to the Wine Industry in Nova Scotia
- Planning and Establishing the Vineyard
- Cellar Operations
- Integrated Pest Management
- Canopy and Vineyard Health Management
- Aging and Bottling Wine
- Wine Marketing and Sales
- Vineyard Harvest and Post Harvest Maintenance
- Grape Processing and Fermentation
- 3 Work Integrated Learning Practicums

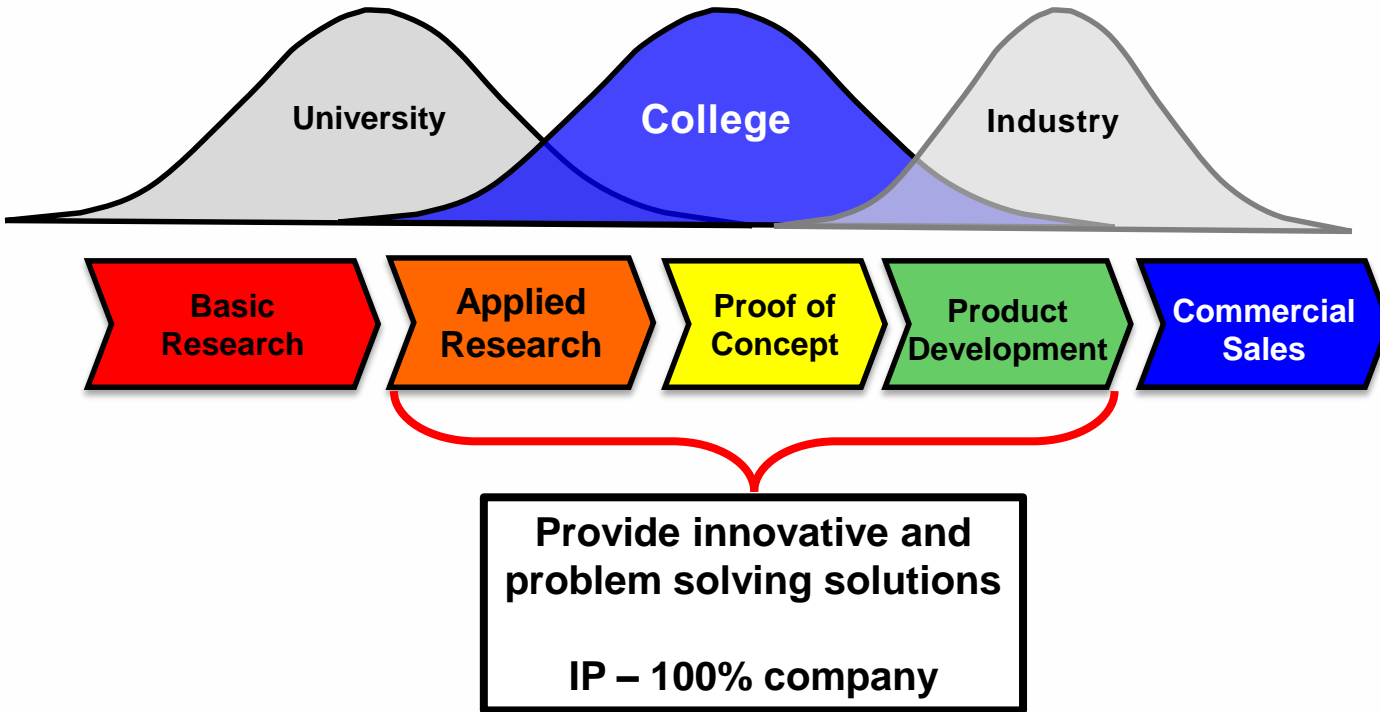
Semester 1	Semester 2	Semester 3
BIOL 1025 Biology for Viticulture 0.75 credits (45)	COMM 1228 * Communications II 0.5 credits (30)	ELTVP-WINE 3-1.0 Elective - Prescribed (VITICULTUR) (Semester 3) 1.0 credits (60)
BUSI 1090 Introduction to the Wine Industry in Nova Scotia 0.75 credits (45)	HLAN 3006 * Integrated Pest Management 1.0 credits (60)	MKTG 1150 Wine Marketing and Sales (INCOMPLETE) 0.75 credits (45)
COMM 1227 Communications I 0.5 credits (30)	VITI 1105 Canopy and Vineyard Health Management 1.75 credits (105)	VITI 1205 Vineyard Harvest and Post Harvest Maintenance 1.75 credits (105)
VITI 1005 Planning and Establishing the Vineyard 1.5 credits (90)	VITI 1965 * Viticulture Practicum II 2.0 credits (120)	VITI 1969 * Viticulture Practicum III 2.5 credits (150)
VITI 1960 * Viticulture Practicum I 1.25 credits (75)	WINE 1110 Aging and Bottling Wine 1.0 credits (60)	WINE 1210 Grape Processing and Fermentation 1.0 credits (60)
WINE 1010 Cellar Operations 1.25 credits (75)		

FUTURE DEVELOPMENTS



- Expansion of grape & wine programming
 - Industry Workshops
- Expansion and initiation of research projects
 - Vineyard Site Suitability Mapping
- Continuous improvement via PAC & Terroir Project Learnings
- Holistic College Vision/Integration of Production & Consumption
 - Bridge between horticulture/viticulture & culinary/tourism

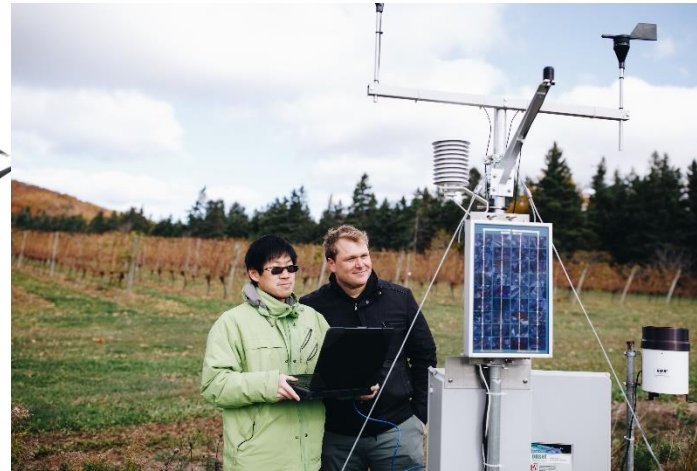
APPLIED RESEARCH - EATLAB COLLABORATIONS



Increase Productivity and Quality

Reduce Risks

Product Development



APPLIED RESEARCH - EATLAB COLLABORATIONS



Productivity and Quality

Drones



APPLIED RESEARCH - EATLAB COLLABORATIONS

Agriculture Sensor Development



Wind Speed
Air Temperature
Relative Humidity
Precipitation
Solar Radiation



NDVI
(Plant vigor)



Moisture
Temperature
pH
Electroconductivity



Integrated Geospatial
Applications for site specific
management

Decision Support System

Productivity and Quality

Plant and soil

Harvest determination
Crop determination
Yield prediction
Irrigation amounts
Pest mgmt
Disease mgmt



APPLIED RESEARCH - EATLAB COLLABORATIONS

Nova Scotia Wine Mapping

Nova Scotia Wine Mapping REGISTER

Login

Email
user@domain.com

Password
password123

Check

Feedback and questions? © 2018 Copyright by NSCC-CCRE Applied Research

Remove Vineyard

Nova Scotia Wine Mapping ACCOUNT LOGOUT

ADD VINEYARD

Vineyard Name
NASC TEST

Area
0.0000 Ha

Establishment Date
1 May, 2018

Save Cancel

Map

Remove Vineyard

Table of Contents

Introduction	4
Soil	
Soil Drainage	7
Soil Rooting Depth	9
Soil Stoniness	10
Soil Texture	11
Soil pH	12
Soil Bulk Density	13
Soil Water Holding Capacity	14
Weather	
Historical Temperature	17
Max and Min Temperature Chart	17
Warm Temperature Probability Chart	18
Cold Temperature Probability Chart	18
Cumulative Growing Degree Days	19
Rainfall	20
Topography	
Elevation	22
Slope	23
Aspect	24
Land Cover	25
Appendix	
Data Sources	28

Nova Scotia Wine Mapping ACCOUNT LOGOUT

Hello MAT VANKOUGHNETT

Map

ADD VINEYARD

NASC TEST (growing -)

Remove Vineyard

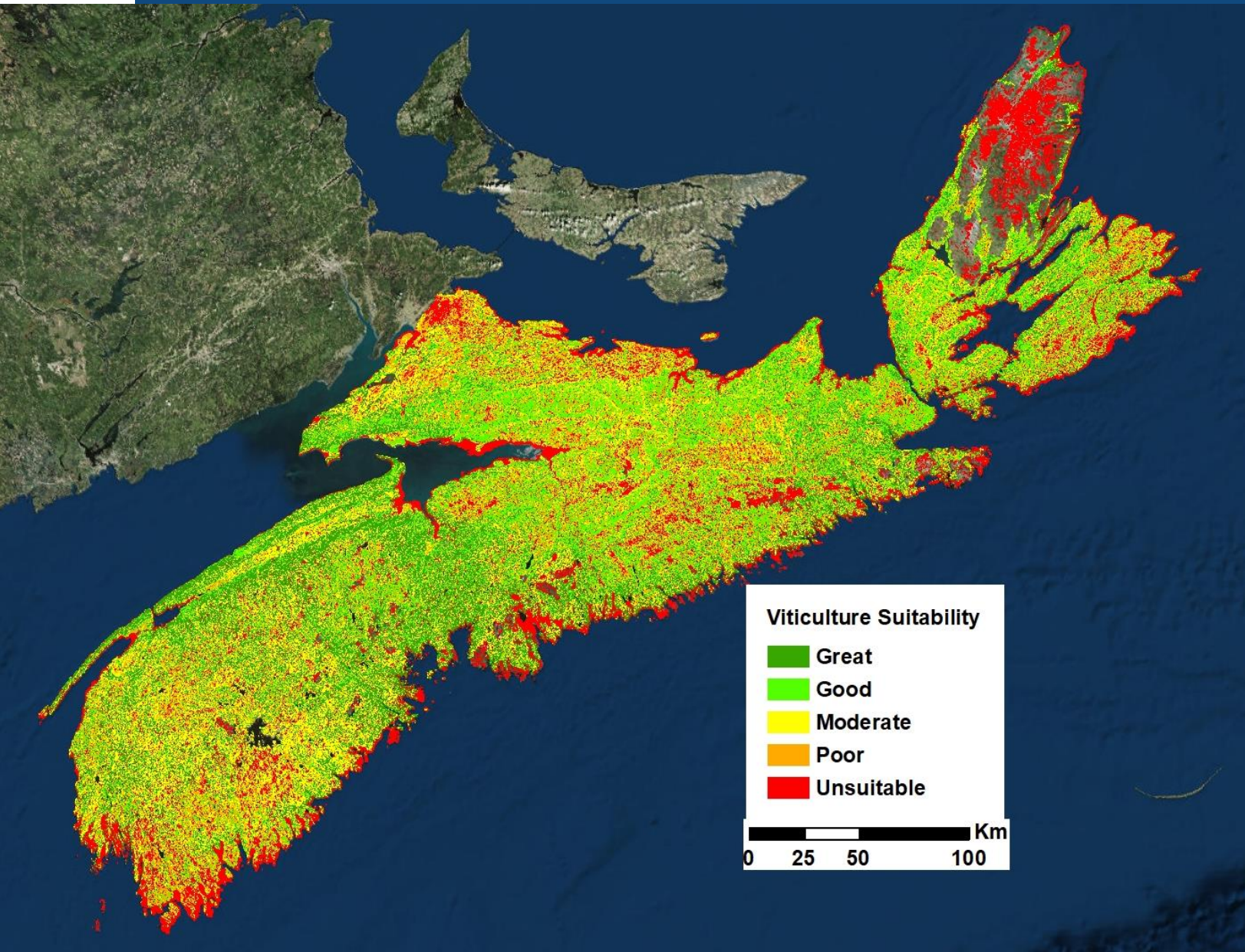
Feedback and questions? © 2018 Copyright by NSCC-CCRE Applied Research

Productivity and Quality

Plant and soil



APPLIED RESEARCH - EATLAB COLLABORATIONS



Reduce Risks

Spatial analysis and geomatics



APPLIED RESEARCH - EATLAB COLLABORATIONS



Reduce Risks

Frost protecting products



APPLIED RESEARCH - EATLAB COLLABORATIONS



Product Development

Food and Wine



FUTURE RESEARCH- QUALITY OF YIELD

Utilize small research plot on campus
Engage vineyards and wineries
Guided by industry support and involvement

Potential areas of study (“QUALITY”)

Vineyard Site Suitability & Continued climate research (EATLAB)
Cultivar evaluation trial / exploration of new varieties
Canopy management
Trellis systems
Grape breeding
Precision viticulture



Kingstec Research Plot: 0.25 Acres



STRIVE. ***nscC***