



# Truffle Association of British Columbia

Spring 2008

## **Greetings from the Directors:**

**President: John Neudorf**

**Vice President: Quentin Wyne**

**Secretary: Sharmin Gamiet**

**Treasurer: Cathy Wyne**

**Newsletter Editor: Shannon Berch**

## **Truffle Association of British Columbia Spring Meeting**

**Date:** Saturday March 29, 2008

**Time:** 1:30 – 3:00 p.m.

**Location:** Abbotsford Agriculture Centre  
1767 Angus Campbell Rd Abbotsford

**Call In Number: 1-866-596-5277**

**Access Code: 9345247#**

This meeting will include discussion of current truffière practices and a protocol for verifying truffle production in BC truffières.

The Association had planned to coordinate this event to take place with the planting of the demonstration truffiere at the UBC in Vancouver. Ongoing testing however has revealed that the soil pH has not yet reached the desired level. Following an informal consultation with Dr. Ian Hall and Dr. Charles Lefevre it was decided by UBC staff that planting should wait until the soil pH has reached and stabilized at the desired level of 7.8 - 7.9. As a result, it is likely that this event will occur in conjunction with the fall meeting instead. Good things come to those who wait, as they say.

## **Fall 2007 TABC Meeting**

The association wishes to thank Dr. Dan Durall and the University of BC for it's hosting of the fall 2007 meeting at the Okanagan campus on 18 November 2007. The tour of the Genetics lab and testing facilities was particularly interesting. Thanks also to Cathy and Quentin Wyne who arranged the truffle Dinner at Ricardo's restaurant. 20 members and guests attended, sampling truffles specially imported for the event.

## **Oregon Truffle Festival**

January 25 - 27, 2008

Eugene, Oregon

Several members of the association attended the recent Oregon Truffle Festival in Eugene, Oregon. Shannon Berch was the ever-eloquent MC for the Growers Forum, while Sharmin Gamiet and Quentin Wyne provided assistance to Charles Lefevre and his staff as volunteers during the event.

Activities included interesting presentations by Dr. Tom Michaels, Dr Alessandra Zambonelli, and others, and visits to local truffières and a winery. Dr Ian Hall, who together with Dr Zambonelli and Dr Brown released their book *Taming The Truffle*, provided the keynote address, in which he described the evolution of the New Zealand industry and some of the threats

facing the global industry in the future.

Unfortunately, some of our members contracted a vicious strain of the flu while in Oregon, but all seem to have now recovered.

### **TABC Presentation at the Pacific Agricultural Show**

Dr. Shannon Berch provided a lecture on the challenges and risks of attempting the production of Périgord Black Truffles in British Columbia as part of the Horticulture Growers Short Course at the Pacific Agricultural Show. Now in its tenth year, the Pacific Agricultural Show is a focal point for the agriculture industry in BC. We are grateful to David Trotter of the Ministry of Agriculture and Lands for the kind invitation to showcase the TABC research and demonstration program and explore the many challenges associated with this unproven yet exciting enterprise. The lecture was well attended with approximately 40 or more persons in the audience, despite the wide variety of other interesting and unique activities and presentations there.

### **TABC Ponders How to Verify Reports of Commercially Grown Périgord Black Truffles in British Columbia**

At this time there have been a number of truffières planted in BC and some are over 3 years old. It is our greatest hope that one of our members will create history by being the first person in Canada to discover a cultivated truffle in their truffle orchard or truffière. The TABC Executive has recently been discussing how best to verify the

production of truffles, including Périgord black truffles, in British Columbia truffières.

Why, you might ask, does one have to verify the production of truffles in BC truffières? For a number of reasons.

First, the first report of truffle production in a BC truffiere will be big news since to date European truffles have not been produced in BC. And we don't even know yet if it will be possible to produce them here. We hope so, but we are not sure. Hence the need for the research and demonstration project.

Second, *Tuber melanosporum*, the Périgord black truffle, has look-alikes; look-alikes worth very little compared to the Périgord black truffle. Primary among the look-alikes is *Tuber brumale*, the winter truffle. Also of concern are various Asian truffle species that closely resemble the Périgord black truffle. Even the most experienced truffle expert cannot distinguish among these species without detailed morphological examination of truffle tissues and spores and without DNA sequencing analysis. Even the most experienced truffle expert can be shocked to discover winter truffles in a batch of supposed black truffles purchased from Europe to be used to inoculate seedlings.

Third, we must avoid at all cost the mistaken introduction of these look-alikes into truffières in BC. Once one of these low-value look-alikes is in your truffière, there will be no getting it out and little chance of good production of the Périgord black truffle.

In France, scientists and nursery managers who failed to distinguish between the winter truffle and the Périgord black truffle inadvertently introduced the winter truffle into truffières. According to Hall et al. 2007 (page 152), “its spread through the truffle-producing regions has been regarded as a catastrophe”. Elsewhere in the world, there are major concerns about fraudulent use of these look-alikes in the truffle trade. Therefore, we need to be vigilant in BC to avoid this kind of problem here.

Because of this, the TABC executive has drafted steps to be followed to verify that a truffle has been produced in a BC truffiere. We propose to discuss the need to establish a protocol and the details of the protocol at the upcoming TABC Spring Meeting. For now, we believe that the steps should include:

- The truffle must not be disturbed from the location in which it is found until and unless an independent observer is present.
- The truffle must be removed in the presence of an independent observer who can verify the finding.
- The identification of the truffle species must be carried out by Dr. Dan Durall, University of British Columbia – Okanagan, who is experienced, qualified, and equipped to conduct both morphological and genetic testing (i.e. DNA sequencing) to determine that it is indeed *Tuber melanosporum*.
- The grower must agree to donate the truffle to the

Fungal Collection, Pacific Forestry Centre, Victoria, BC.

**Reference:**

Hall, IR, GT Brown, and A Zambonelli. 2007. Taming the truffle. The history, lore, and science of the ultimate mushroom. Timber Press, Portland OR.



**Truffle trees for sale at a truffle auction in France.**

**Truffle-Related Movie**

No Reservations (2007)  
Directed by Scott Hicks. With Catherine Zeta-Jones, Aaron Eckhart, Abigail Breslin.

Despite its American origin, no weaponry, and an excellent film with several funny scenes regarding truffles.

**Culinary / Agritourism Tourism By Quentin Wyne**

An interesting article recently appeared on a Toronto travel website relating truffle tourism experiences available for the 2008 tourist season. The Drome Region of France is referred to as the heart of Truffle country, with 80% of

French production originating there. The article, by Bea Broda Connelly appeared on her website Travel Video TV, and describes the ongoing trend toward culinary tourism experiences as a method of adding value for producers, by providing a complete truffle experience, “from the field to the plate”. While hotels, Inns and smaller, on-farm establishments also participate, all offer similar attractions including visits to a truffle market, an opportunity to meet growers and learn about truffle cultivation and of course, a cooking experience. Truffles are presented in dishes from appetizers to desserts, paired with local wines and no doubt garnished with a hearty helping of truffle farming and industry folklore to accent the experience.

Of course, opportunities for similar first hand food experiences are developing world wide as increasingly sophisticated tourists and food enthusiasts seek out the source of their respective palate preferences. Similar Canadian offerings are now available in the wine grape and other food crop industries and there are undoubtedly those who have been watching and waiting with bated breath for BC truffles to hit the market.

Chefs across Canada are very interested in the activities of our Association and its experimental growers. Certainly the potential is there for truffles, once they are proven viable here, to be a boon to local culinary tourism. For members of the local truffle industry this opportunity also brings responsibility to appropriately manage expectations in this regard and to

maintain the highest standards of objectivity when speaking to our progress and any watershed events that (hopefully) may occur. The Association and its project were discussed at the BC Culinary Tourism Conference held at the Sutton Place Hotel in Vancouver at the end of February. There is enormous interest and excitement about the association, its members and producers. Hopefully the excitement will be tempered with a healthy dose of reality. It may turn out to be a long wait.

### **Cautionary Note in Selection of Liming Agent** **By Shannon Berch**

Two reports prepared by the National Organic Standards Board Technical Advisory Panel in the USA (please access via the URL's provided below) provide a review of the activity and concerns about the use of calcium oxide (chemical formula:  $\text{CaO}$ ; common names: burnt lime, burned lime, quicklime, unslaked lime, fluxing lime, pebble lime) and calcium hydroxide (chemical formula:  $\text{Ca(OH)}_2$ ; common names: calcium hydrate, slaked lime, hydrated lime, lime water) in soil.

Calcium oxide or calcium hydroxide is used as a liming agent in agriculture when a rapid pH change is desired. However, calcium oxide and calcium hydroxide cost more than other liming agents, and are unstable, caustic in nature, and difficult to handle. Although calcium oxide and calcium hydroxide will affect a rapid pH change, they are not stable and depending on soil conditions may eventually revert to

the insoluble form. Early studies comparing rates of reaction for different liming materials concluded that while hydrated lime reacted more quickly than high calcium limestone, differences largely disappeared after 2 months. So, the patient truffle grower is rewarded before too long for using more stable forms of liming agent, such as ground limestone, by an equivalent soil pH change at less cost and less threat to human and soil health.

Because calcium oxide and calcium hydroxide are difficult to mix in soil, uneven concentrations and over-liming may result. Excess lime can tie up available nutrients such as manganese, copper, zinc, and phosphorus.

Calcium oxide and calcium hydroxide can severely irritate and burn the eyes and skin, irritate the lungs if breathed in, and cause abdominal pain, vomiting and diarrhea if ingested.

Given the extreme pH change needed for most truffières in BC and the huge amount of liming agent needed to carry out this change in soil, the concerns about the negative effects of these two agents on human health and soil health are even greater than they would be if these agents were used in the smaller amounts needed when used as fertilizer.

I strongly recommend against the use of these agents for soil pH change in truffières.

#### **URLs for references:**

Calcium oxide:

<http://www.ams.usda.gov/nop/NationalList/TAPReviews/caloxtap.pdf>

Calcium hydroxide:

<http://www.ams.usda.gov/nop/NationalList/TAPReviews/CalHydrox.pdf>

#### **TRUFFLE ARTICLES OF NOTE**

Friday, February 22, 2008

By JENNY BARCHFIELD,

Associated Press Writer

**AUPS, France — Philippe Daniel opens a slim briefcase so buyers can glimpse his wares, then snaps it shut with a wary glance over his shoulder.**

Daniel is not dealing in contraband but in truffles - tubers prized for their heady fragrance and rich, earthy flavor. One of the world's most sought-after gastronomical treasures, truffles fetch astronomical prices, and sellers like Daniel are always alert for spying competitors. Daniel used to deal in big quantities. But for the past five years, drought has been parching the Var region of southeast France as well as truffle-producing regions in Italy and Spain - and today he can fit his entire weekly harvest in a single plastic bag. He's not the only one.

Organizers at the market in the Var village of Aups, where Daniel plies his wares, have had to suspend the weekly wholesale auction, where middlemen used to bid tens of thousands of dollars for mounds of truffles. The reason: these days there simply aren't enough of the fragrant fungi. Now, foodies and tourists buying truffles by the piece have replaced the bulk-buying middlemen, and most transactions at the once-bustling market are measured in grams. At the Aups market, the black truffle's price has more than doubled over the past five years, to about \$560 a pound.

Farmers say production is down by 50-75 percent this winter season and they blame global warming, warning that if thermometers keep rising - as many scientists predict they could - France's black truffle will one day be just a memory.

This is not the first time weather has caused a dramatic downturn in French truffle production. A severe drought in the early '60s more than halved the harvest, bringing it down to about 50 tons. But the trufficulteurs, as truffle farmers are known, contend this current dry spell is longer and more acute. "*Climate change has got the seasons out of whack, it's hotter than it used to be and it rains lots less,*" said Jean Montesano, 76, a trufficulteur for more than half a century. "*I want my grandson to take over, but if things continue like this, who knows if there will be anything left.*"

Last year, the harvest of Italy's prized white truffle was down as much as 75 percent from 2006, according to Andrea Rosin, the head of truffle export company Tartufingros. Spain's 2007 black truffle harvest was down more than half from five years earlier, said Daniel Oliach, of a growers' association in the northeastern region of Catalonia. In Italy, white truffle prices were up about 60 percent in 2007 from the previous year, and one white truffle, a giant weighing about 3 pounds, 4 ounces, fetched a record \$330,000 at auction.

Nowadays, say the trufficulteurs, only truffles cultivated in irrigated plantations have much of

a chance of surviving the sunbaked summers. "*Anyone who doesn't irrigate will not have a single truffle, not a single one,*" said veteran Montesano, whose face is as deeply etched as the wind-blown hills around Aups. Montesano waters his 25-acre plantation of French oaks, the black truffle's preferred host, with groundwater pumped from deep-lying aquifers.

Climate scientists say it is too early to link the drought to global warming, but point to computer models that suggest the entire Mediterranean basin is getting warmer and dryer. The Met Office, Britain's weather agency, says that by 2030, Mediterranean rainfall is expected to be down by one-quarter, and annual average air temperatures are likely to be up in Europe by as much as 6 degrees Centigrade by 2080.

Changing climate could mean changing truffle terrain. Already, producers in the southern hemisphere and in China are making inroads. France imported 33 tons of fresh or frozen truffles from China in 2007, overtaking French production for the first time. Australia and New Zealand, which introduced truffles from Europe about 20 years ago, now produce a half ton of the fungus annually - mostly for domestic consumption, said Ian Hall, the New Zealand-based author of "Taming the Truffle" and other books on fungi. "*If Europe's catastrophic decline continues, it could well be that the Southern Hemisphere will overtake production in the north,*" Hall said in a telephone interview.

## **Tobacco to Truffles – Revolutionizing the Southeast's Farm Economy**

NewsWireToday - /newswire/ - Holly Springs, NC, USA, 01/04/2008

A North Carolina business woman's new company is investing millions to transform 200 acres of farmland into the largest black diamond truffle orchard in America. The decadently delicious fungi are prized by top international chefs and are one of the most expensive foods in the world. The crop is expected to yield nearly \$40,000 per acre, more than ten times the market value of tobacco.

Susan Rice, founder of Black Diamond French Truffles Inc. (BDFT), is the newest of only a few truffle cultivators in the United States. The company is staking nearly \$25 million on her vision to reinvent North Carolina as the Napa Valley equivalent of truffle cultivation. *"Napa is to wine, as North Carolina can be to truffles,"* said Rice. *"We are growing a rare gem in these fields. This crop could replace tobacco and single-handedly revitalize our farming industry."*

Rice has put together a team of experts to lead the development process at her Black Périgord plantation located near the legendary Pinehurst golf course, home to the U.S. Open. Rice is currently working with some of the first pioneers of US truffle farming, including farmers, ecologists and chefs. The company's team includes: Business Developer Charles Warren, an investment and

financial analyst who's worked in the financial and the commodities markets; Corey Rice who has a degree in Ecology and Evolutionary Biology from Princeton University; Advisor George Little, the 2004 NC Gubernatorial candidate and Attorney Mark Mirkin who specializes in the law of entrepreneurship.

Black Diamond French Truffles will grow, harvest, package and sell truffles to wholesale and retail customers around the world. The company will also brand its truffles through sales and marketing to retail customers. BDFT will support local farmers as they establish truffle farms of their own.

Serial entrepreneur Susan Rice founded Black Diamond French Truffles Inc. in 2007 on farmland in Vass, North Carolina, in Moore County near Southern Pines and Pinehurst. This area is located on 280 acres of prime farmland. The truffière will be 200 acres developed over a period of two years. This truffle orchard is set to be the largest in the United States.

## **NON-COMMERCIAL WEB SITES OF INTEREST TO THE TRUFFLE COMMUNITY**

**Truffle Association of British  
Columbia** [www.bctruffles.org](http://www.bctruffles.org)  
**New Zealand Truffle Association**  
[www.southern-truffles.co.nz](http://www.southern-truffles.co.nz)  
**North American Truffle Society**  
[www.natruffling.org](http://www.natruffling.org)

**Truffle Association of British Columbia  
Personal Information Protection Policy**

Effective January 1, 2004 the BC PIPA Act came into effect. The TABC has always taken great care in protecting the confidentiality and privacy of our members, suppliers and partners.

The Association collects and uses personal information about individuals as needed and will only collect use and only discloses such personal information in a manner that would be considered reasonable under the circumstances, and with the permission of its members.

**If you wish to submit an article for the next newsletter, or ask the directors a question, send your email to the directors at:**

Email: [info@bctruffles.org](mailto:info@bctruffles.org)

**Truffle Association of British Columbia Membership Information**

Memberships are yearly and are to be renewed by the end of April. Cheques should be made payable to the Truffle Association of BC, and can be mailed to:

Sue Gordon, Office Manager  
Ministry of Agriculture and Lands  
Access Centre - 5785 Duncan Street  
Duncan BC V9L 5G2

A tax receipt will be issued on receipt of your cheque

Name: \_\_\_\_\_

Business Name: \_\_\_\_\_

Mailing Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

Do NOT disclose my email or personal information to other members;

Web Site Address: \_\_\_\_\_

Yearly Membership \$20 \_\_\_\_\_ Yearly Family Membership \$25 \_\_\_\_\_