

## The History of Tokaj

Thomas Laszlo – Heron Hill Winemaker

*Thomas Laszlo began his career in wine production after obtaining a diploma in farm management from the University of Guelph. Initially, he worked as a Vineyard Manager in Niagara-On-The-Lake leading quickly into an assistant winemaking position at Henry of Pelham Estate Winery located in St. Catharines, Ontario. After several years at Henry of Pelham, Thomas Laszlo along with his family moved to Tokaj, Hungary to fill the position of Technical Director at Chateau Pajzos and Chateau Megyer. Starting with the 1997 harvest until the completion of the 1999 harvest, he oversaw the whole production, from grape to bottle, for the two Bordelaise owned Tokaji estates. After relocating to Niagara Falls, Ontario, for the next two years he continued his work in Tokaj as a Winemaking Consultant and in addition acted as a Liaison for Pajzos and Megyer travelling and making contacts throughout North America and Europe. During his time in Europe, Thomas worked closely with Bordeaux Oenologist, Michel Rolland and his team in order to improve the quality of the Tokaj region's dry white varietals. Due to Thomas Laszlo's extensive experience in dessert winemaking styles he has been called upon several times to act as a wine judge including the honour of representing Hungary as a judge at Vinexpo 1999 in Bordeaux. During the 2001 vintage Thomas Laszlo split his time between Ontario and Tokaj and as of 2002 he has resigned his duties in Hungary.*

*Since August of 2002 Thomas has been overseeing wine production at Heron Hill Winery located on Keuka Lake in the Finger Lakes Region of New York state in the position of Vice President of Winemaking Operations.*

The region of Tokaj gave its name to the famous Tokaji wines. It is located on the northeast border of Hungary. The region is comprised of 28 villages and surrounded by the River Tisza and the River Bodrog that connect at the village of Tokaj. Other well-known villages in the region include Mád, Tarcas, Tállya, Sátorajauhély and Sárospatak. The village of Sárospatak is where the vineyards of Pajzos and Megyer can be found. This village holds great historical importance, as it was once the political, cultural, and religious center of Hungary.

Tokaj's history spans almost one thousand years. It is believed that the Celts were responsible for planting the vineyards and by the time the "Magyars" settled in the Carpathian Basin, estimated at about A.D. 895, the vineyards were already established. Being familiar with viticulture and winemaking from their previous nomadic existence, the Magyar tribes continued vine growing in the region. It is recorded that in the middle of the eleventh century, French settlers arrived in the region and contributed to its development. Italian wine growers in the thirteenth century were invited by King Béla IV in order to help re-establish the vineyards after the Mongol invasion of 1241. The Italian wine growers are thought to be responsible for bringing with them the Furmint vine, which remains the dominant grape variety of the region to this day. In the eighteenth century, many Germans were also drawn to the region because of its rich vineyards.

Tokaj's fame reached such heights in the sixteenth century that Italian writers documented that Tokaj wine contained gold. This belief that gold could be found in Tokaj is said to be the reason behind the attack on the Tokaj Castle in 1565 by Lazar de Schwendit, Marshal of the Habsburg forces. Speculation says that after the battle, thousands of vine cuttings were gathered and taken back to the estate of Lazar de Schwendit in Alsace where the vines were called Tokay. These vines in Alsace continue to be called Tokay (Pinot Gris) and are the source of much confusion for the wine buyer.

Although Tokaji wine was very popular in the earlier centuries, it is thought that the wines of Tokaj were dry until the 17<sup>th</sup> Century. Legend states that Aszú, (botrytis affected berries), was discovered in 1650 when the threat of a Turkish invasion in the region pushed back the harvest into late fall. When the grapes were finally harvested, the noble rot had set in the berries. It was not until the following Easter when the wine was pulled from the cellars and tasted, that they realized the botrytis jewel that had been uncovered.

Early records of vineyard classification of the entire Tokaj-Hegyalja date back to 1641 where laws regulated vineyard selection and maintenance procedures such as irrigation and the building of terraces. The Vine Law also established the official harvest start date of October 28<sup>th</sup>. In 1660 the wine laws included the regulation of aszú harvesting and wine making procedures.

The Rákóczi family played a very important role in the establishment of Tokaj as a leading wine region. They became landowners of Tokaj-Hegyalja when György Rákóczi, Prince of Transylvania (1630-1648), married Zsuzsanna Lorántffy and obtained her dowry of lands. Prince Rákóczi I quickly established a monopoly over the wine trade in the region and became very dedicated to the vineyards of Tokaj. In his commitment, the vineyards and wine trade excelled. When Ferenc Rákóczi II took charge of the lands in 1694, he was also enchanted with the vineyards of the region and furthered the development of Tokaj-Hegyalja.

Tokaj wine became so sought after that Prince Rákóczi II used the wine to gain political favors. Wine was sent all over Europe reaching as far as Sweden. Some recipients included King Frederick of Prussia, Peter the Great, and Louis the XIV of France who is said to have given Tokaji Aszú the famous title of,

“Vinum Regum - Rex Vinorum.” Which means, “Wine of Kings, King of Wines.” This Latin quote appears on each bottle of Tokaji Aszú to this day.

Tokaji wines have long been thought to bestow medicinal and restorative qualities. These beliefs were only strengthened when such figures as the King of Prussia, Frederick the Great and King George V of England were said to have used Tokaji wines to speed their recoveries after illnesses. Frederick the Great was quoted when he labeled Tokaji wine as “a balsam for health”.

It was not only Tokaji wine that was believed to cure people of their ailments, but also the soil from the vineyards. The soil was shipped all over Europe in the hopes of curing such ailments as tumors, fevers, plague and dysentery. Physicians in Germany, London, and Austria recorded accounts of the soil’s healing properties in the early eighteenth century.

Unfortunately, as in the rest of Europe, Tokaj-Hegyalja was hit by the Phylloxera epidemic at the end of the nineteenth century. One year after a superior vintage in 1890, the region was hit by the epidemic leaving the vineyards lifeless by 1892. The vineyards were re-established by grafting vines onto the Phylloxera resistant American rootstock. The grape varieties planted were Furmint, Hárslevelű, and Yellow Muscat.

Within a few years the Tokaj Region began to flourish once again, but this was short lived. Hungary was soon to disappear behind the Iron Curtain in 1947 when the communist state monopoly took over all areas of wine production and trade in Hungary. This was accomplished through the establishment of state farms and wineries with the driving force of quantity over quality. Most of the production remained behind the Iron Curtain reaching markets primarily in the Soviet Union.

Communism was reaching its end in Hungary by the late 1980’s. The Tokaji region began its privatization in 1990 when foreign interests from France, England, Germany and Spain started to invest in winery estates. New wine laws were established in 1990 based on existing wine laws of EU countries. The Tokaji Renaissance was soon established which is known as a union of the Classified Vineyards of Tokaj. Presently, the union consists of nineteen Tokaji estates that share in the mission of, “ restoring one of the world’s most prestigious wines to its former glory ”

The Tokaj-Hegyalja appellation includes 28 villages and covers slightly over 5000 hectares of vineyard. There are two main soil types, loess and heavier soils of volcanic origin. Seldom does the vineyard altitude exceed 200 meters above sea level. Generally the best vineyards are located on gentle south facing slopes that are contained between hills to the East and West. A lengthy growing season with frequent “Indian Summers” coupled with the moisture generated by the nearby Bodrog and Tisza Rivers provide perfect conditions for the development of Noble Rot. Minute quantities of Aszú can be found

nearly every year but it is very infrequent to have aszú years of good quality and good quantity. Recently the following years are generally considered to be good vintages for the region of Tokaj: 2000,1999,1995,1993,1988,1983,1975,1972.

Prior to WWII, the winegrowers of Tokaj-Hegyalja were harvesting over thirty different types of grapes. Although Furmint was a dominant grape variety, the growers planted many different varieties in order to increase their chances of having aszú just in case the Furmint wasn't successful. Many of these varieties were extremely rare, indigenous grapes with names such as Góhér, Balafánt, Kővérszőlő, and Mézesfehér. A few red grape varieties could also be found.

Currently the Hungarian Wine Law allows only four grape varieties to carry the Tokaj name. These four varieties were selected for their consistency in quality and quantity. Despite the fact that these four varieties provide an excellent recipe for Tokaji Aszu, there are some curious growers that would like to rediscover some of Tokaj's ancient varieties. These individuals can be seen roaming about abandoned vineyards during harvest time searching for gnarled 100 year old vines, bearing but a few grapes, with the hopes that these forgotten treasures might be revived.

### *History of Grape Varieties*

Furmint is an indigenous Hungarian variety found throughout Hungary but densely planted in Tokaj. It forms approximately 70% of the Tokaj vineyards, ripens late and routinely reaches peak maturity at the end of October. Although Furmint can usually reach 14° alcohol every year, it also maintains a high level of acidity that is very crucial in balancing sweet wines. Under optimal conditions for botrytis development, the thin-skinned Furmint is very susceptible to noble rot. It is the Furmint component of all great Tokaji Aszú that is responsible for the wine's excellent age ability.

Hárslevelü is another native variety which is much more widespread throughout Hungary than Furmint. This large, loosely bunched variety accounts for about 25% of the Tokaji vineyards. A late ripener, Hárslevelü often produces a more aromatic wine with softer acidity. Its real usefulness lies in its ability to better withstand excessive rainfall than the Furmint variety. In years where the Furmint is overcome by botrytis, the Hárslevelü variety still holds hope for Aszú production.

Yellow Muscat is a mutation of Muscat Blanc a Petits Grains that is thought to be the oldest known grape variety. With only 5% of Tokaji vineyards being planted with Muscat, it is usually quite rare to see the

varietal Tokaji Muscat on the shelf, and even more rare to see a sweet wine made entirely from this variety. The yellow Muscat ripens earlier than either Furmint or Hárslevelü, which makes it very suitable to be used as the base dry wine in aszú wine production. It is slightly lower in acid but by no means soft. Tokaji Muscat is very useful for enhancing the aromatic profile of aszú wine.

Zéta (formerly known as Oremus) is a recent addition to the blend of Tokaji grapes. This Hungarian crossing of Furmint and Bouvier was developed because of its ability to ripen early and for its excellent production of noble rot. Quite neutral as an independent varietal, Zéta is generally used as a blending component of aszú production. Currently the plantings of Zéta are well below 1% of the total vineyards in Tokaj.

### *The Wine Styles*

#### Dry wine

With average yields of 5000 to 8000 kilos per hectare, the Tokaji vineyards produce a sizeable amount of dry wine. Even in great aszú years it is very rare for more than 20% of the harvest to be affected by noble rot. Much of the dry Furmint and Hárslevelü is sold off as bulk wine while the best lots are bottled. No matter what the variety, dry Tokaji wine can be characterized as full bodied, mineral, with a strong and dry backbone of acidity. Tokaji dry wine is best when consumed young.

#### Late Harvest

The late harvest category is relatively new in its present form although wines of similar quality and style have always been made in Tokaj. “Főbor” or “main wine” was an ancient sweet wine style that made use of botrytis bunches. These wines were consumed fresh and young as well as after a period of ageing in barrels.

Under the current Hungarian Wine Law, a late harvest wine has to be made from 100% of a stated varietal and there is no requirement for barrel ageing. At the Estates of Pajzos and Megyer, we feel that our late harvest wines reflect the maximum expression of the variety used. This allows the consumer to better appreciate the uniqueness of each Tokaji variety, free of oak influence and blending, while aiding in their comprehension on how these varieties are combined to make Tokaji Aszú

#### Szamorodni Dry and Sweet

These wines form the first step of the Tokaji Quality Wines of Distinction grading system. Szamorodni is a word of Polish origin that means, “ as it comes.” Over ripened grapes that may or may not be botrytis affected are selected to make a dry wine with a high alcohol content. If the must weight is too high to vinify dry, then residual sugar is left and the Szamorodni is sweet. The current wine law only requires aging of this wine in barrel for one year followed by one year of bottle ageing. However, most consumers of Szamorodni prefer a strong oxidative note in their wine that requires several years of ageing in barrel.

### Aszú

The basic recipe for aszú winemaking has changed very little over the last 400 years. Dried out raisin-like berries are hand selected, berry-by-berry, starting in early October with the Muscat and continuing into mid November with Furmint and Hárslevelű. These hand picked aszú berries were traditionally collected in wooden baskets that were worn on the backs of the pickers. This basket is known as a puttony. One puttony typically would hold 25 Kg of aszú berries. In order to extract the sugars and flavors out of these very dry aszú berries it is necessary to conduct a maceration. The aszu berries are placed in a tank with fresh must, fermenting must or finished dry wine depending on the wine style desired. The aszú is pressed after a maceration time of between 12 to 48 hours. Traditionally, puttonys of aszú were added to the amount of wine that a gönci barrel holds which is 136 litres. Therefore, the more puttonys used, the sweeter the aszú wine.

3 puttonyos aszu = 75Kg aszu in 136 litres of base wine

4 puttonyos aszu = 100Kg aszu in 136 litres of base wine

5 puttonyos aszu = 125Kg aszu in 136 litres of base wine

6 puttonyos aszu = 150Kg aszu in 136 litres of base wine

Presently, the basic ratio between aszú and base wine is similar despite the fact that we weigh out the portions in much larger quantities without the aid of a puttony or a gönci barrel.

In 1993 the Hungarian Wine Law made two critical changes pertaining to aszú wine production. The old Wine Law stated that Tokaji aszú must be aged for two years plus additional years according to the puttony level. This meant that a 5 Puttonyos aszú would have to be aged for seven years in barrel. Although the best quality aszú wines could handle this extended time in barrel, much of the wonderful aszú fruit flavors were sacrificed. Currently, Tokaji Aszú only requires ageing for a minimum of 2 years in barrels and one year in bottle independent of the puttonyos level. Until 1993 there was no Law

pertaining to the age of the base wine. This meant that a ten year old base wine could be used if available. Although the character of the aszú from a given year definitely dominates the character of the wine, 80% or more of the liquid portion of Tokaji aszú is made up from the base wine. Due to the changes in 1993, it is now Law that the base wine or must used in making Tokaji Aszú has to be the same year as the aszú berries. Both these laws have greatly helped in advancing the quality and integrity of Tokaji Aszú.

#### Residual Sugar Content

3 puttonyos 60-90g/l

4 puttonyos 90-120g/l

5 puttonyos 120-150g/l

6 puttonyos 150-180g/l

Aszú Esszencia 180g/l and above

#### Esszencia

It is told that the nobility of the 1700s would measure their wealth by the number of Esszencia casks in their cellars. Like other rarities of the world such as diamonds, gold and caviar, great Tokaji Esszencia is made only in very rare circumstances and only when nature allows it. In most years when aszú berries are harvested, it is possible to collect Esszencia. However, seldom is such a high degree of purity and excellence reached as in the 1993 Pajzos Esszencia. Esszencia is the pure liquid that flows clear and freely from the bins of collected aszú berries. There is no mechanical pressing involved. The weight of between 1000 and 5000 kilograms of aszú berries collected in appropriate sized containers is solely responsible for the minute trickle of Esszencia that flows out. Given the dry nature of high quality aszú berries the aszú can be collected and stored for up to 2 months without any problem provided that the surrounding environment is dry and cool. Daily the small amount of Esszencia is collected from the bottom of the aszú storage containers. Esszencia yields are between 2% and 5 %. This means that from 1000 kg of aszú berries one might get between 20 and 50 litres of Esszencia. Obviously, much of the sugar remains in the aszú berry and is recovered through the maceration techniques used in aszú winemaking. On average, in a good botrytis year one hectare (2.5 acres) will produce between 100 and 300 kilogram of aszú berries. An average worker can pick between 10 and 15 kilograms of aszú berries per day. The Esszencia juice is fermented by wild yeast only since the commercial strains of yeast tend to die in such a concentrated liquid. The current Wine Law in Hungary states that Esszencia must be at least 450 g/l sugar at harvest. The 1993 Pajzos was slightly over 600 g/l when collected and it can happen that certain lots of Esszencia may reach beyond 800 g/l sugar. The 1993 Esszencia fermented for 4 years in a combination of 40% new Hungarian oak barrels and 60% stainless steel. Pajzos is the first company of the

Tokaj Renaissance to produce and bottle successfully an Esszencia. The last Esszencia to be made available to the West was a bottling from the state owned winery, the 1947 Tokaj Kereskedőház Esszencia ( \$1200 USD). Traditionally Esszencia has been used in adjusting the Aszú wine and was seldom bottled. By bottling this excellent example of Tokaji Esszencia we have made available a legend that up until now was only the privilege of the aristocracy and royalty.





## Château PAJZOS

### 1999 Chateau Pajzos 5 Puttonyos Aszú - Pajzos Estate Vineyard, Tokaj, Hungary

Base Wine	Aszu Berries	Esszencia
100% Sárga Muskotály	100% Furmint	80% Furmint 20% Hárslevelű
Picked: Oct. 10, 1999	Oct. 15 to Nov. 5 <sup>th</sup> 1999	Same Picking Window
Brix: 25°	65°	72°
TA: 9 g/l	22 g/l	24 g/l
Bottled: June, 2002		
<b>Wine: Alc.11% T.A. 12.2g/l R.S. 160g/l pH 3.4 VA: 1.08 g/l SO<sub>2</sub>: 25/183 ppm</b>		
Drinkability: best in 2005+, can age Decades		

### Winemaking

#### Harvesting

- Strict Hand Harvesting for Muscat Base Wine and Single Berry Furmint Selection
- Sorting was done as best possible in the vineyard
- Only overripe or Szamorodni quality Muscat picked for base wine
- Mostly 1<sup>st</sup> Class Aszu berries were used with the majority more *passerillé* like
- **THE BEST BOTRYTIS HAS A MOUSTACHE AND NOT A BEARD**

#### Pressing (Base Wine)

- Destem/Crush/Press 50 ppm SO<sub>2</sub> used in pan to decrease Wild yeasts
- Inoculate with reliable and fast fermenter (EC-1118, K1)

#### Aszu Collecting

- Individual Aszu berries were picked and stored in large containers holding up to 3 tonnes of berries
- Aszu berries of high quality can stay lumped together for months without spoiling or fermenting
- During the resting period Free Run Esszencia is collected, about 20-50 liters/tonne

#### Aszu Combination

- When the fermenting Muscat Base wine reached about 11–13% Alc., the formulae of mixing Base Wine to Aszu berry occurred on Oct.30<sup>th</sup> 1999
- Furmint Aszu berries were blended with Muscat Base wine at a rate of 1 kg to 1 L
- Basically equal to 150 kgs of Aszu in 6 Puttonys to One 136 L Gonci barrel of wine
- Aszu berries are lightly macerated and blended with base wine using a Delta Progressive Cavity Must Pump turning the mixture in Aszu “tészta”
- Aszu “tészta” is left to macerate in Bucher Tank Presses between 12 to 36 hours depending on quality
- 1<sup>st</sup> pressing yields very sweet juice 4% Alc and 450g/l, later pressings yield lower sugar amounts, Generally only 1<sup>st</sup> and 2<sup>nd</sup> pressings used for top Aszu wines
- All base wine fermentation stops because of immense Sugar accumulation
- Blend of pressings are done at this time, separated to tank or barrel for fermentation
- Fermentation resumes with wild “Tokaji” strain, 9.5% Alc., achieved in 2 weeks
- Long fermentation in new Hungraian “Szerdnyei” barrels, 250 liters
- (the last 1.5° Alc. took 6 months to finish), racked after fermentation

#### Elevage (Aging)

- aged in same new barrels in the Antaloczi cellar for a total of 2.5 years, Cellar Temp.: 42-46 F and 96% humidity, All year round,
- Taste adjusted with 1% Esszencia, Sterile membrane bottled, No Cold Stabilization

HERON HILL  
WINERY



**2002 Heron Hill Late Harvest Riesling**

100% Estate Vineyard – Keuka Lake

Picked: Oct. 15, 2002

Bottled: June 10<sup>th</sup> 2003

Brix: 31° (at Harvest)

**Wine: Alc.11% T.A. 9.7g/l R.S. 115g/l pH 3.16 VA: 0.81 g/l SO2: 27/210 ppm**

Drinkability: upon release, best in 2006+, can age 5 to 10 years more

*Winemaking*

Harvesting

- Strict Hand Harvesting
- Sorting was done as best possible in the vineyard
- Some sour rot was present and the VA on juice was higher than desirable
- 90% of fruit was completely botrytised, large amount of Conidia present
- Most Botrytis fruit was picked out before the fresh harvest started on Oct. 30<sup>th</sup>

Pressing

- Whole Bunch pressed, 50 ppm SO2 used in pan to decrease Wild yeasts
- Slow pressing at cool temp. (45 F) to preserve fruit flavor
- Dry ice used (1kg/100 L) cools 1°C, Pressed for 24 hours

Fining

- 70 g/hl Polylact used (Caesin/PVPP) to decrease Lacasse and other enzymatic browning
- 50 g/hl Deodorizing Carbon used to absorb VA and off flavors
- 150 g/hl Pure Calcium Granular Bentonite, Let stand for 24 hours then racked

Fermentation

- Steady, neutral fermenting yeast EC-118 was used at 30g/hl, Starter took 36 hours to build up to inoculation strength, Doubling amount each step, done 4 times
- Warm to 68 F, Rack with full aeration when 5 brix depleted
- Fermentation was conducted at 65 to 72°F, Aerated again at 12 brix depletion
- Fermented to 11.5% or 115 g/l RS in **Seven Days Total**
- Stopped fermentation using Dry Ice from 67 F to 28 F in less than 30 mins.

Elevage (Aging)

- Held at 28 F, for 1 week, Racked and SO2 150 ppm
- Stored for 6 months in Stainless Steel at 34 F
- Pad filtered at 4 microns and then Sodium Bentonite at 75g/hl
- Racked and filtered 2.5 micron pad after two weeks on Bentonite
- Pad filtered again to sterile 1.5 to .45 micron
- No Cold Stabilization Needed
- 100 ppm SO2 added the day of bottling, Sterile Membrane Bottled

Flight No. \_\_\_\_\_ Sample No. \_\_\_\_\_ Color \_\_\_\_\_

Fruit derived / varietal flavors: \_\_\_\_\_

Texture / Mouthfeel: \_\_\_\_\_

Overall / Balance / Structure: \_\_\_\_\_

Comments: \_\_\_\_\_

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