

# M A SILVA UPGRADE



TCA decreasing values



Improvement production conditions



**ISO 22000:2005 certification**

---

## M.A.SILVA UPGRADE

---

M.A. Silva is very proud of the work that it has been developing at several levels, and would like to inform the important customers about the latest achievements.

The analytical data we have been collecting for the last 2 years leads us to state: ***TCA is no longer a problem for us.***



In fact, we are able to control and keep it to such a low level that it would not affect the wine. One of the reasons for that is that Mr Manuel Silva himself and his son Mr José Silva invest a great deal of their time touring the cork tree forests to select and follow closely the purchasing and transportation of corkwood to Alter do Chão (Boiling facility in the south). We deeply believe that this is why the average TCA level in the cork plank is quite low already before boiling.



MASilva3 at Alter do Chão allow us to do enormous amounts of cork bark stocks and to keep them in the best environmental conditions to correctly stabilize.

We believe that by giving corkwood the best conditions we can have the best corks.

---

## M.A.SILVA UPGRADE

---

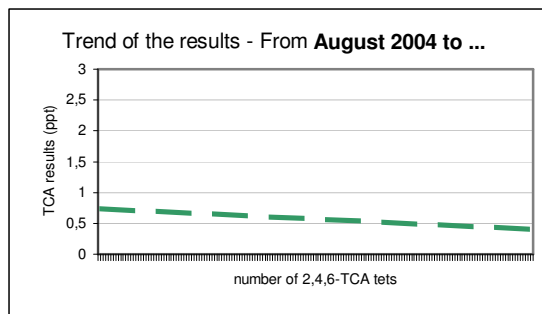
*Refreshing the memory...*

### Pressure and Water Boiling System for Corkwood

M.A.Silva introduced a hi-tech boiling system for corkwood that provides several improvements to current methods. This boiling process provides better extraction of volatile compounds responsible for cork taint. Complete removal of TCA from the boiling water in the degasification tower eliminates the possibility of cross-contaminating corks with contaminated water from previous boiling process. Reduction of the stabilization time after boiling leads to decreased probability of undesirable development of fungi.



After boiling, the average TCA level in the middle of the plank is reduced to 0.75ng/L, and we are not talking about corks, but about cork plank. Furthermore, the TCA level and other off flavours are further reduced during production, namely by using our proprietary washing system called *Mazzoni*® (ozone based). See the trend line on the chart below.



---

## M.A.SILVA UPGRADE

---

M A Silva is focussed on the constant **improvement of cork production conditions.**



Some of our latest improvements in cork production are as follows (photos are self explanatory):

### **Striping & Punching**



### **Dimensional Rectification**

---

## M.A.SILVA UPGRADE

---

**Electronic sorting**



**Part of the Washing area:**



---

## M.A.SILVA UPGRADE

---

### Warehouses:



### Manual sorting



---

## M.A.SILVA UPGRADE

---

### Printing, Coating & Packaging Area



### Shipping Area



These investments in the MASilva facility allowed us to think further beyond.

**ISO 22000:2005 – Food safety management systems. Requirements for any organisation in the food chain.**

On September 1<sup>st</sup> 2005, the International Organisation for the Standardization (ISO) officially published the ISO 22000, the new international standard for the food chain safety. A standard developed by food industry experts together with representatives of specialised international organisations in collaboration with *Codex Alimentarius Commission*, an organisation jointly founded by FAO (Food and Agriculture Organisation of the United Nations) and WHO (The World Health Organisation).

The aim of ISO 22000 is to allow the harmonious execution of the HACCP method (Hazard Analysis Critical Control Points). This method is currently considered by the food industry experts as the best available tool to guarantee food safety of the consumer. Since the significant increase of various alimentary crisis, some countries, but also some industry groups and manufacturers have established their own security regulations resulting in coexistence of more than 20 different regulations.

Thanks to the international consensus that lead to its development, the ISO 22000 has become the international standard for food safety.

We are proud of our work in the last months to implement ISO 22000:2005 and to integrate it into the ISO 9001:2000.

MASilva is one of the first companies in the world to be certified with the newly born ISO 22000:2005 system and for sure THE FIRST CORK COMPANY in the WORLD to be granted this distinction.

ISO 22000:2005 is intended to define the requirements for companies that wish to exceed the regulatory requirements for food safety.



The certification process comprised two stages, both carried out on-site. First, a Stage 1 assessment which consisted of a system review and planning visit to confirm that the system is designed to meet the requirements of the ISO 22000. Secondly, a Stage 2 assessment to verify the effectiveness of the implemented system against the requirements of the standard ISO9001 and ISO22000 and the commitments made in the company's quality and food safety policy. This 2<sup>nd</sup> stage was performed in 12 and 13 December 2005.

### Why to implement a certified ISO 22000 system?

It makes it easier to implement Codex HACCP system for food hygiene in a harmonized way which does not vary with individual country or product concerns.

It allows all types of organizations within the food chain to implement a food safety management system.

ISO 22000 reflects global consensus on best management practice.

The improved processes reduce costs from waste reduction, better use of time and resources, lower product failures and **better traceability** of product throughout the entire supply chain.

MASilva has the traceability knowledge of their corks all way through from the forest to the final customer.