

Advanced systems for the enhancement
of the environmental performance of
WINEries in Cyprus (WINEC)



Deliverable 15

First internal audit report for Tsiakkas winery



Nicosia, January 2011

Contents

Introductory	3
The audit	4
Waste	4
Air pollution.....	5
Water	5
Urban Situation	5
Soil Contamination.....	6
Consumption of non-renewable resources	6
Conclusions	7
Annex	

Introductory

Following the initiation of the Environmental Management System (EMS) at Tsiakkas Winery in June 2010, the WINEC project team carried out the first internal audit on January 3, 2011. The audit examined the progress of the Environmental Action Plan. In particular RTD TALOS Ltd and the University of Cyprus assisted Tsiakkas Winery in conducting this first internal audit.

At the stage of conducting the first internal audit, the EMS was evaluated as non adequate and effective and many of the actions set during the second half of 2010 were not completed. However, the recruitment of an oenologist by the winery and his appointment as the winery's Environmental Manager since the beginning of December 2010 was considered as a very important development and decision taken by the management and within the next months of the EMS implementation the progress is expected to be more evident.

As a result of this audit the most significant corrective actions that have been identified and have to be implemented by the winery within the following months include the following:

- Resubmission of request to suppliers in order to obtain all environmental / health specifications of raw and packaging materials used in the winery.
- Identification of a clear list of equipment that does not have the CE mark and assess their possible replacement.
- Identification of a solution in order to conduct analyses on pesticide residues in grapes.
- Environmental Manager will continue to inquire with the market in relation to undertaking replacement of lamps with energy efficient ones and examine with the competent authorities ways and subsidies in order to further encourage the use of environmentally friendly sources of energy.
- Quality analysis of the water used for production should be carried out the soonest possible.

The audit

Due to work overload and poor priority setting many of the actions set during the second half of 2010 were not completed. An Environmental Manager, oenologist, has now been hired to resolve this issue.

Recalling environmental weaknesses identified in the Initial Environmental Review in June 2010, waste was assessed as the most important environmental aspect having the largest environment impact of the winery's activities. Air and CO₂ emissions, were assessed as the second most significant environmental aspect. Water was assessed as the third most important aspect in view of the recognisable drought problem Cyprus has been facing over the years. Urban situation, soil contamination and consumption of non-renewable resources were also amongst the environmental hot spots.

As regards the six environmental aspects addressed for action in the Initial Environmental Review the following were deduced:

Waste

During the Initial Environmental Review it was acknowledged that there was no awareness, especially as regards social responsibilities and resource preservation. Resources used for packaging, corks, the making of wooden barrels and glass bottles all involve ecosystem destruction.

What the Environmental Manager of the winery reported at the audit was that suppliers have no clear understanding on the kind of specifications needed to be obtained and that is why not all environmental and health specifications for packaging and raw materials were collected. It was agreed during the audit that additional information would be provided to suppliers in order to understand why this information is needed and ensure that suppliers comply with those requests.

Perhaps the most important achievement for the winery, reported during the audit, was its membership to Green Dot. All packaging material produced in the market are managed by Green Dot. However, much remains to be done with regard to obtaining the relevant environmental and health specifications.

Air pollution

Air pollution as said above, was assessed as the second most significant environmental aspect. The CO₂ footprint was evident both during the production of wine but also in other supporting activities to production such as transfer of raw materials. During the visit it was reported that nothing was done to reduce the CO₂ footprint in terms of energy, production and storage; however, it was acknowledged that given the small size of the winery this is not of top priority at the moment.

Water

A main issue addressed during the Initial Environmental Review as regards wastewater, was that liquid waste from the production area was discharged untreated into the ground. Other than that, water consumption during viticulture and production activities of the winery was not recorded.

By the time of the first internal audit, water meters were installed and the winery had a clear indication of the water consumed. However, daily recording of water consumption was deemed necessary in view of the design of the winery wastewater treatment plant and the winery shall proceed with this action immediately. In addition quality analysis of the water used during production has not been carried out. Related to the produced wastewater the winery wastewater treatment plant is now at the design stage.

Urban Situation

A concern in this category for which action should be taken until the end of 2010 is the absence of chemical analysis to determine the possible residues of pesticides in wine, which could be threatening to human health. In addition, all specifications of the chemicals used in the winery should be obtained. No analysis was carried out by the time of the first internal audit while the implementation of the Directive with regards to pesticide residues in grapes is not clearly guided by the competent authorities. RTD TALOS Ltd along with the Environmental Manager of the winery agreed to examine ways by which the required analysis could be carried out. Not all equipment used in production included CE mark specification information and for this reason it was agreed to compile a list and put it under assessment for necessary upgrades and replacements.

Soil Contamination

Soil toxicity was not amongst the environmental aspects given high priority since the winery follows Good Agricultural Practice. To the date of the audit the winery used no fertilizers in the vineyards and they carried out sulphur spraying only when needed. As was reported during the audit the winery is not in the position to ensure that such practices are also followed by suppliers. It was agreed that the winery would encourage further awareness and perhaps organize meetings in order to address this issue to the suppliers. Also it was agreed to re-submit requests clearly specifying the type of information needed by the EMS.

Consumption of non-renewable resources

The consumption of non-renewable resources such as electric energy was not assessed as a major environmental aspect during the Initial Environmental Review mainly because the overall trend in electricity consumption did not seem to increase. However, this is under assessment due to the fact that wine production tanks are presently outside exposed to often very hot summer temperatures which require a substantial amount of energy until the product reaches storage facility level temperatures.

The winery was to replace energy efficient lamps and this has not taken place until the end of 2010. After inquiring in the market, it was found that they cost over 100 euro each, something that the winery cannot financially stand at the moment. It was agreed during the audit that the Environmental Manager will continue examining with competent authorities ways and subsidies in which they can encourage further insulation and the use of environmentally friendly sources of energy.

The first internal audit results have been included in the relevant EMAS easy templates (Quick Check and Control Panel) and are attached to this report.

Conclusions

Based on the assessment conducted during the first internal audit the non-conformities, the corrective and preventive actions have been filled in the relevant EMAS easy templates and are summarized in the following table:

Problem	Proposed Solution	Date of Implementation
Not all environmental/health specifications for raw materials and packaging have been obtained by suppliers	Resubmit request clearly specifying the type of information needed by the EMS	28/2/2011
Not all equipment in production have their CE mark specifications information	Identify a clear list of the equipment that need CE mark and assess their possible replacements Do a replacement/upgrade list	31/1/2011
The analysis on pesticide residues in grapes has not been carried out	TALOS and Environmental Manager will come up with a cost effective solution to this matter	30/6/2011
The replacement of energy efficient lamps has not taken place	Environmental Manager will continue to inquire in the market and also see possible government subsidies in undertaking a replacement of lamps on a small pilot scale	31/12/2011
The water analysis for production has not been carried out	Carry out water analysis the soonest possible	31/1/2011
The possibility of obtaining permission to drill a second water pump has not been examined	Inquire with competent authorities the possibility of obtaining a permit for drilling	31/7/2011
The CO ₂ used in production and packaging is not captured	Research and produce evidence on the subject and inquire alternative manners on packaging and storage of wine avoiding CO ₂ gases and using alternative ones	28/2/2011

RTD TALOS will remain in close collaboration with the management of the winery to ensure the prompt completion of all necessary actions to be undertaken by the winery. It was agreed that the next internal audit will take place in a few months (possibly at the end of April 2011) by RTD TALOS, in order to reassess the system and so that the internal audit results show a more evident EMS implementation progress.

ANNEX

Control Panel

AUDITED EMS SECTIONS

	Every 6 months	Every year
PLAN	<ul style="list-style-type: none"> ● 4.3.3 Environmental management programme ● 4.3.3 Objectives and targets 	<ul style="list-style-type: none"> ● 4.2 Environmental policy ● 4.3.1 Initial environmental review ● 4.3.2 Legal and other requirements
DO	<ul style="list-style-type: none"> ● 4.4.3 Internal and external communication ● 4.4.5 Control EMS documentation ● 4.4.7 Preparation of emergency situations ● 4.4.2 Identification of training needs 	<ul style="list-style-type: none"> ● 4.4.1 Structure and responsibilities ● 4.4.4 Documentation ● 4.4.6 Develop codes of conduct
CHECK	<ul style="list-style-type: none"> ● 4.5.1 Control and measurements ● 4.5.3 Corrective actions ● 4.5.4 Records (Eco Logbook) ● 4.5.5 Internal audit (Quick check) 	<ul style="list-style-type: none"> ● 4.5.2 Legal compliance (Quick check)
ACT	<ul style="list-style-type: none"> ● 4.6 Management review 	

Main comments following the audit

THE EMS IS SUITABLE, ADEQUATE AND EFFECTIVE? + YES \ NO
EVALUATION AND KEY LEARNING FROM CORRECTIVE AND PREVENTIVE ACTIONS

	<i>Problem</i>	<i>Solution</i>
1	Much of the actions set during the second half of 2010 have not been carried out mainly due to work overload and poor priority setting	The Management has hired an oenologist (Mr. Vangelis Bakalexis) who is now the Environmental Manager of the Winery.
2	The implementation of the Directive with regards to pesticide residues in grapes is not clearly guided by the competent authorities	Our consultants (RTD TALOS ltd) are presently examining ways by which the required analysis is carried out
3	Most of our suppliers have no clear understanding on the kind of specifications we need to obtain.	The Environmental Manager must provide additional information why we need such information and ensure that suppliers comply with our requests

SIGNIFICANT ACTIONS WITH SUPPLIERS, SUBCONTRACTORS AND EXTERNAL PARTIES

While we have become member of Green Dot and comply with legislative requirements with regards to the packaging produced we still need to liaise further with our suppliers abroad in obtaining essential information with regards to environmental and health specifications.

Control Panel

Year: 2010

4th Half

2nd Half

ACTIONS PROGRESS REPORT *(i.e. State the actions identified during the Ecomapping)*

Much of the actions have not been completed within the second half of 2010. However, the recruitment of Vangelis Bakalexis has been a very important development and decision taken by the management. He is an oenologist by profession and he has been appointed as our Environmental Manager. Among others his most important job task is to ensure the effective implementation of the EMS.

The storage facility for fertilizers is presently under construction and due to be completed within the next month. The installation of water meters has been one of the two most significant progresses made thus far. This is an important realization and the management needs to come up with a solution on how water resources are effectively being managed.

Our membership to Green Dot has been the second most important achievement as now all of our packaging materials produced in the market are managed by Green Dot.

EVALUATION OF OPERATIONAL INDICATORS RELATED TO OBJECTIVES *(e.g. trends)*

While our packaging waste is been managed in accordance to legislative requirements, much remains to be done with regards to the consumption of raw materials. We need to examine ways to conserve water and energy. We are currently monitoring the consumption of both water and energy and realized that this is proportionally very high. Due to Climate Change high temperatures during most of the year has caused us to maintain cooler temperature in our storages and hence consume much energy. We are examining with competent authorities ways and subsidies in which we can encourage further insulation and the use of environmentally friendly sources of energy.

We need to reduce our CO₂ footprint in energy use and also during production and storage of our wine.

Our water consumption is also a worrying factor and we need to explore alternative ways during production especially with regards to the cleaning of our barrels.

We are aware and follow Good Agricultural Practices. Since conducting our Initial Environmental Review we have not used any fertilizers in our vineyards. However, we are not in the position to ensure that such practice is also followed by our suppliers' vineyards. We need to encourage further awareness with them and perhaps organize meetings in which we further address this issue.

ENVIRONMENTAL MANAGEMENT INDICATORS

Number of Non-Conformities detected: **7**

Number of Non-Conformities solved / total number of non-conformities: **0/7**

Number of hours of training / total number of employees: 4 hours (25 June 2010), Total number of employees/winery collaborators trained: **9**

48 % of actions closed from the action programme

Date: 04 January 2011

Name and Signature: Costas Tsiakkas

Tsiakkas Winery Quick Check

QUARTERLY

4.5.5 INTERNAL AUDIT

Environmental Programme
Internal and external
communication
Control of documents
Preparation of emergency
situations
Corrective actions

4.5.1 CONTROL AND MEASUREMENTS

Records (Eco logbook)
Environmental Policy
Legal requirements
Objectives/Targets
Structure and responsibilities
Identification of training needs
Documentation
Develop Codes of Conducts
Management Review

4.4.6 GOOD PRACTICES

4.5.1 EVALUATION OF LEGAL COMPLIANCE

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: Not all environmental/health specifications for raw materials and packaging have been obtained from suppliers

Source of the problem: Unclear requests

Proposed solution: Resubmit request clearly specifying the type of information needed by the EMS

Date: 03/1/2011

NCR: 1

Date of Implementation: 28/2/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: Not all equipment in production have their CE mark specifications information.

Source of the problem: Some of the equipment is old and prior to accession and the original suppliers no longer exist

Proposed solution: Identify a clear list of the equipment that need CE mark and assess their possible replacements. Do a replacement/upgrade list

Date: 03/1/2011

NCR: 2

Date of Implementation: 31/1/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: The analysis on pesticides residues in grapes has not been carried out

Source of the problem: Unclear implementation of the Directive by competent authorities.

Proposed solution: TALOS and Environmental Manager will come up with a cost effective solution to this matter

Date: 03/1/2011

NCR: 3

Date of Implementation: 30/6/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: The replacement of energy efficient lamps has not taken place

Source of the problem: After inquiring in the market they cost over 100 euro each

Proposed solution: Environmental Manager will continue to inquire in the market and also see possible government subsidies in undertaking a replacement of lamps on a small pilot scale

Date: 03/1/2011

NCR: 4

Date of Implementation: 31/12/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: The water analysis for production has not been carried out

Source of the problem: Work overload and poor priority setting

Proposed solution: Carry out water analysis ASAP

Date: 03/1/2011

NCR: 5

Date of Implementation: 31/1/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: The possibility of obtaining permission to drill a second water pump has not been examined

Source of the problem: Work overload and poor priority setting

Proposed solution: Inquire with competent authorities the possibility of obtaining a permit for drilling

Date: 03/1/2011

NCR: 6

Date of Implementation: 31/7/2011

Signature: Vangelis Bakalexis

4.5.3 NON-CONFORMITIES, CORRECTIVE AND PREVENTIVE ACTIONS

Problem: The CO₂ used in production and packaging is not captured

Source of the problem: Following the examination of CO₂ emissions is not clearly evident that the amount of CO₂ emitted is higher than the amount of CO₂ absorbed by the vineyards.

Proposed solution: Research and produce evidence on the subject and inquire alternative manners on packaging and storage of wine avoiding CO₂ gasses and using alternative ones

Date: 03/1/2011

NCR: 7

Date of Implementation: 28/2/2011

Signature: Vangelis Bakalexis

Date of Audit: 03 January 2011

Name and Signature of Auditor: Myria Ioannou