1. **Basic Information**

1.1. CRIS Number: 4573/05

1.2. Twinning Number: MT/2003/IB/AG-02

1.3. Title: Capacity Building in Malta - Oenology Unit

1.4. Sector: Agriculture

1.5. Location: Department of Agriculture and Fisheries, Malta

2. **Objectives**

2.1. **Overall Objective**

To strengthen the capacity of the Ministry of Agriculture and Fisheries in Oenology.

2.2. **Immediate Objectives**

- To set up an efficient Oenology Unit within the Department of Agriculture with respect to its organisational structure, human resources, administrative and technical capacity to be able to implement and monitor the *Acquis* on wine in particular emphasis on Council Regulation (EC) 1493/99.

- To prepare and execute a strategy for gathering information on the local winemaking conditions.

- To establish control methods with respect to trade with third countries, regulation of QWPSR, oenological practices and processes, fraudulent practices, and market mechanisms.

- To develop the role of producers’ organisations (PO) in the Ministry’s activities through workshops for PO and vintners.

2.3. **Accession Partnership and NPAA priority**

**Accession Partnership**

Continue preparations for implementation of the Common Agricultural Policy and rural development policies.
A new Wine Act in line with EU legislation and, in particular, Council Regulation (EC) 1493/1999 has been drafted and will be enacted by the end of 2002.

3. **DESCRIPTION**

3.1. **Background and Justification**

A Viticulture and Oenology Unit has always existed within the Department of Agriculture and Fisheries. During the last twenty years a decrease in scientific staff has limited the functionality of the unit and has led to a subsequently low output. In view of the new Wine Act governing wine production potential the Government of Malta is seeking to strengthen the Oenology Unit. The latter will be responsible for the implementation of the new laws, which are in line with EU regulations, and the relevant areas of the *Acquis*. To this purpose key people have already been identified to work within the unit and the Government is committed to strengthen the unit.

In view of the current capacity building in the Viticulture Unit the present fiche will build on the results achieved so as to comply fully with Council Regulation (EC) 1493/99 with respect to both viticulture and oenology.

3.2. **Linked Activities**

- A twinning project is being implemented under the 2002 Programme to strengthen the Viticulture unit within the Viticulture and Oenology Unit.

- During the year 2000, the National Statistics Office in collaboration with the Department of Agriculture within the Ministry for Agriculture and Fisheries carried out a survey of the area used for vine cultivation, taking into account the variety of vines and their age. This survey, which will be conducted annually, will be the basis of Malta’s submission to the EU’s Annual Survey of wine production.

- Within the Oenology Unit, two laboratory workers are to be recruited at middle management level.

- A study to ascertain the competitiveness of the wine industry in Malta has been carried out by the Institute for the Promotion of Small Enterprise (IPSE). The final report has been completed.

- One Scientific Officer is to be recruited prior to the start of the project within the Oenology Unit as an Oenologist;

- Suitable premises for The Viticulture and Oenology Unit have been identified by the Malta Government. Extensive refurbishment and preparation of identified premises in view of the project will be carried out during 2002/2003 at an estimated cost of 500,000 Euros allocated from Malta national budget.

Subsidiary legislation under the Product Safety Act (Cap.427) to provide for quality and marketing standards for wine and wine products will be adopted and will enter into force by the second quarter of 2002. The Producers’ Organisation Act to enable producers to have access to market intervention and to submit proposals for multi-annual operational programmes for improving production and marketing will also be enacted by the second quarter of 2002.

3.3. Results

- Strategy for Wine Sector in place.
- Identification of the necessary measures required for the upgrading of existing wineries including HACCP measures.
- An experimental station with functional oenological laboratory.
- Equipment required for the setting up of the oenology laboratory purchased.
- Trained trainers in oenology and laboratory procedures and a long-term training strategy developed.
- Trained officials for the upkeep of the relevant registers and to provide extension services.
- Information seminars and training workshops to inform wine growers and producers on new regulations and oenological practices allowed.

3.4. Activities

Successful implementation of this project anticipates twinning assistance from an EU Member State for a one-year period. The selected PAA should have extensive theoretical and practical experience in the field of oenology. The advisor will be expected to offer his/her service until the local counterparts have been trained to take over the project.

Other short-term experts will support him/her as necessary.

More specifically this project will:

- Assist the Ministry of Agriculture and Fisheries in identifying measures to upgrade and enhance the sector involved;
- Identify the means required to upgrade wineries;
- Provide assistance in the setting-up of oenology laboratory in terms of equipment, methods of analysis conforming to O.I.V. and EU guidelines, and computerisation needed for an efficient collection and management of results and data;
- Determine specifications and purchase equipment necessary for the determination of the best-suited varieties to be grown under local conditions;
- Train three officials from the Oenology Unit by means of internships and short courses in a Member State in the modern aspects of oenological practices;
– To establish a training programme for three scientific officers at professional level (Viticulture & Oenology)

– Assist in the drawing up of on-going training strategies for current and future field and laboratory officers;

– Provide assistance in the setting up and management of a register of vintners;

– Assist in the setting up of an experimental station to assess quality parameters and characterise Malta grown grapes;

– Advise and ensure that the implemented system satisfies the requirements and common rules for direct support schemes and other schemes under Council Regulation 1493/1999 with regards to the control of market mechanisms, regulation of oenological practices and processes, regulation of product descriptions, designation, presentation and protection, regulation of quality wine psr, regulation of trade with third countries, and control of fraudulent practices;

– Develop a strategy for the identification and control of fraudulent practices;

– Liaise with the Customs Department for the control of imported vine products especially with respect to trade with third countries;

– Assist in the set-up of experimental vineyards at Buskett to compliment and implement results achieved under the twinning project: capacity building in Malta - Viticulture Unit (MT2002/IB-AG-04);

– Hold information seminars and training workshops for organisations and individuals involved in the sector.

3.5. Equipment

Tests foreseen by the Wine Acquis with special reference to EC 2676/90:

1. Density and specific gravity at 20 °c
2. Evaluation by refractometry of the sugar concentration in grape musts, concentrated grape musts and rectified concentrated grape musts 1. Principle of the method
3. Alcoholic strength by volume
4. Total dry extract
5. Reducing sugars
6. Sucrose
7. Glucose and fructose
8. Detecting enrichment of grape musts, concentrated grape musts, rectified concentrated grape musts and wines by application of nuclear magnetic resonance of deuterium (snif-nmr/rmn-fins)
9. Ash content
10. Alkalinity of the ash
11. Chlorides
12. Sulphates
13. Total acidity
14. Volatile acidity
15. Fixed acidity
16. Tartaric acid
17. Citric acid
18. Lactic acid
19. L-malic acid
20. Total malic acid
21. Sorbic acid
22. L-ascorbic acid
23. Ph
24. Sulphur dioxide
25. Sodium
26. Magnesium
27. Magnesium
28. Calcium
29. Iron
30. Copper
31. Cadmium
33. Silver
34. Zinc
35. Lead
36. Fluorides
37. Carbon dioxide
38. Cyanide derivatives
39. Allyl isothiocyanate
40. Chromatic properties
41. Folin-ciocalteu index
42. Special methods of analysis for rectified concentrated grape must
   a. Total cations
   b. Conductivity
   c. Hydroxymethylfurfural (hmf)
   d. Heavy metals
   e. Meso-inositol, scyllo-inositol and sucrose

Equipment for the setting up of the laboratories will be required. The equipment will include the following:

**Wine laboratory Equipment required to carry out the various tests**

a) Atomic Absorption Spectrophotometer for metal ion analysis (tests 25, 26, 27, 28, 29, 30, 35, and 42 (d) above)
b) Microwave digester (related to a)
c) FOSS Infra-Red Winescan analyser (routine tests such as tests 1, 3, 4, 5, 13, 14 and 25)
d) pH meter (test 24)
e) Sulphur dioxide determination apparatus (test 25 and related to c above)
f) Gas Chromatography (GC) equipment (tests 6, 22, 39 and 42e)
g) Hydrogen generator apparatus (related to f)
h) High Performance Liquid Chromatography (HPLC) equipment (tests 7 and 42c)
i) Water still and de-ioniser (basic laboratory equipment & required by EC 2676/90)
j) Wine aroma essence kit (needed to train board members involved in QWPSR organoleptic analysis required by Annex VI point J of EC 1493/99)
k) Distiller and specific gravity apparatus (test 3)
l) UV/Vis Spectrophotometer (tests 7, 16, 17, 40 and 41 also required by Annex VI point J of EC 1493/99)
m) Glassware and Reagents
n) Laboratory Information Management System (LIMS) software

4. **INSTITUTIONAL FRAMEWORK**

- The Department of Agriculture within the Ministry for Agriculture and Fisheries will be responsible for implementing the Acquis in this area;
- The Malta Standards Authority will be responsible for establishing quality and marketing standards for wine and wine products;
- The Consumer and Competition Division within the Ministry for Economic Services will be responsible for the inspection of wine and oenological practices and for designating an accredited laboratory for the testing of the quality of alcohol and spirits imported in Malta;
- A Wine Regulation Board will be set up to advise in the making of policies regulating the viticultural and oenological sectors, develop regulations made under the Wine Act, provide with technical, scientific, legal and other advice in the field of wine and wine related products, participate in research, surveys, programmes, and other activities as may be deemed necessary;
A Producers’ Organisation Act is being drafted. This will enable producers to have access to market intervention aid to put into operation production programmes and market strategies.

5. **DETAILED BUDGET**

<table>
<thead>
<tr>
<th>EU Funding</th>
<th>National co-financing</th>
<th>Total budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution Building</td>
<td>Investment</td>
<td>Total</td>
</tr>
<tr>
<td>Institution building</td>
<td>450</td>
<td>-</td>
</tr>
<tr>
<td>Equipment - oenology laboratory</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>450</td>
<td>-</td>
</tr>
</tbody>
</table>

6. **IMPLEMENTATION ARRANGEMENTS**

6.1. **Implementing Authority**

Ministry of Agriculture and Fisheries Malta, Barriera Wharf, Valletta, Malta CMR 01

Contact Persons:

Mr. George Carbone, Director General (Agricultural Services & Rural Development), Ministry of Agriculture and Fisheries, Barriera Wharf, Valletta CMR 01, Malta
Tel: 00356 21 248802
Fax: 00356 21 231517
e-mail: george.carbone@gov.mt

Mr. Randall Caruana, Scientific Officer, Viticulture & Oenology Unit, Ghammieri, Marsa, Malta
Tel: 00356 21 248802
Fax: 00356 21 231517
e-mail: randall.caruana@gov.mt

6.2. **Twinning**

The project will require a PAA in post for 12 months supported by STEs.

6.3. **Non-standard aspects**

None.

6.4. **Contracts**

The Twinning Covenant will represent the main contract for the project, which covers the costs of the PAA and short-term experts.
A contract for supplies (procurement of equipment required for the setting up of the oenology laboratory) will be concluded in accordance with the procedures laid down in the “Practical guide to EC external aid”.
7. **IMPLEMENTATION SCHEDULE**

   **Start of tendering/call for proposals:** April 2003  
   **Start of project activity:** June 2003  
   **Project completion:** December 2005

8. **EQUAL OPPORTUNITY**

   The Ministry of Agriculture is an equal opportunity employer.

9. **ENVIRONMENT**

   Vineyards contribute to Malta’s environment and landscape providing greenery during the hot and arid summer months. Vines also assist in preventing soil erosion particularly in slopes. These measures are also important for the production of good quality grapes and the production of quality wine. Wine growing regions will be valorised through the establishment of the QWPSR system.

10. **RATES OF RETURN**

    Not applicable.

11. **INVESTMENT CRITERIA**

   11.1. **Catalytic effect**

   The Pre-Accession funds will help in the strengthening of capacity in the Wine Sector in order to continue preparations for implementation of the Common Agricultural Policy and rural development policies.

   11.2. **Co-finance**

   National co-finance contributions will primarily cover refurbishment of premises to be used for the Oenology unit.

   11.3. **Additionality**

   Not applicable.

   11.4. **Readiness**

   A new Wine Act in line with EU legislation has been enacted on 21st June 2002. A building for the Viticulture & Oenology Unit has been identified, refurbishment will be completed by 2003. A Twinning project is currently addressing the capacity building of the Viticulture Unit.
11.5. **Sustainability**

Relevant government policies ensure sustainability. The operational costs will be met out of public funds.

11.6. **Competition**

Services and equipment will be procured in line with the relevant regulations.

12. **CONDITIONALITY**

Sufficient managerial and technical human resources allocated to the Viticulture and Oenology Unit.

**ANNEXES**

I  Logframe planning matrix  
II Implementation time schedule  
III Cumulative contracting and disbursement schedule
## LOGFRAME PLANNING MATRIX FOR OENOLOGY PROJECT

<table>
<thead>
<tr>
<th>Project Nber: 4573/05</th>
<th>Contracting Period Expires: 30 November 2005</th>
<th>Disbursement Period Expires: 30 November 2006</th>
<th>Total Budget: 650,000</th>
<th>EU Contribution: 450,000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>INTERVENTION LOGIC (Project structure)</strong></th>
<th><strong>OBJECTIVELY VERIFIABLE INDICATORS</strong></th>
<th><strong>SOURCES OF VERIFICATION</strong></th>
<th><strong>ASSUMPTIONS AND RISKS</strong></th>
</tr>
</thead>
</table>

### WIDER OBJECTIVES
- To strengthen the capacity of the Ministry of Agriculture and Fisheries in the Oenological Sector.
  
  Wine Sector compliant with EU regulations and rural development plans.
  
  - EU Commission documents
  - EU Regular Reports
  - Statistical reports
  
  Co-ordination between local Authorities
  Deployment of human resources

### IMMEDIATE OBJECTIVES
- To set up an efficient and fully-equipped Oenology Unit within the Department of Agriculture;
  
- To prepare and execute a strategy for gathering of information on the local winemaking sector;
  
- To establish a system of designation and product control;
  
- To instruct grape growers and wine producers on oenology through development of educational campaign.
  
  Provisions of new Wine Act in line with EU legislation and EU Regulation 1493/1999 enforced;
  Wine growers and producers made aware of oenological practices;
  National Mark established
  
  - EU Regular Reports
  - Departmental Report
  - Availability of expertise
  - Availability of human and financial resources
<table>
<thead>
<tr>
<th>INTERVENTION LOGIC (Project structure)</th>
<th>OBJECTIVELY VERIFIABLE INDICATORS</th>
<th>SOURCES OF VERIFICATION</th>
<th>ASSUMPTIONS AND RISKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESULTS</td>
<td>Better management of the implementation process;</td>
<td>Commission evaluation reports. Regular reports</td>
<td>Provision of the necessary inputs to deliver required activities. Co-operation of all Stakeholders</td>
</tr>
<tr>
<td>− Measures to upgrade and enhance Wine Sector identified;</td>
<td>Laboratory functional;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Strategy for Wine Sector drawn up;</td>
<td>Equipment in use;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Plan for the establishment of a QWPSR appellation system, market measures and controls;</td>
<td>Training programmes are developed for all officers concerned;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Laboratory and experimental station set up;</td>
<td>Register of vintners up to date;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Equipment for laboratory in place and operational;</td>
<td>Awareness on the oenological practices and process allowed;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Official trained in oenology;</td>
<td>Attendance of wine growers and producers for seminars and workshops;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− Training strategies for field and laboratory officers prepared;</td>
<td>First research project planned and underway – Ochratoxin A survey</td>
<td></td>
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<tr>
<td>− Register of wineries set up;</td>
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<tr>
<td>− Regulations in line with EU policies installed in national law;</td>
<td></td>
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<tr>
<td>− Trade with third countries in line with EU Regulations;</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>− Information seminars and training workshops held.</td>
<td></td>
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</tr>
<tr>
<td>ACTIVITIES</td>
<td>OBJECTIVELY VERIFIABLE INDICATORS</td>
<td>SOURCES OF VERIFICATION</td>
<td>ASSUMPTIONS AND RISKS</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Assist the Ministry of Agriculture and Fisheries in identifying measures</td>
<td>Report identifying measures to upgrade and enhance Wine Sector</td>
<td>Tender documents.</td>
<td>Availability of financial and human</td>
</tr>
<tr>
<td>to upgrade and enhance the Wine Sector;</td>
<td>upgrade and enhance Wine Sector drawn up;</td>
<td>Evaluation reports.</td>
<td>resources</td>
</tr>
<tr>
<td>Assist the MAF in drawing up a strategy for the Wine Sector in line with</td>
<td>Wine Sector strategy in place;</td>
<td></td>
<td>Provision of technical expertise.</td>
</tr>
<tr>
<td>Malta’s rural development plan;</td>
<td>Equipment purchased;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop a plan for the upgrade of wineries;</td>
<td>1-2 trained trainers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist in the setting-up of the laboratory;</td>
<td>Programme of seminars and workshops drawn up.</td>
<td></td>
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<tr>
<td>Procurement of equipment already identified and other equipment still</td>
<td></td>
<td></td>
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<tr>
<td>to be identified for laboratory;</td>
<td></td>
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<tr>
<td>Training of 1 scientific officer on oenological practices;</td>
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<tr>
<td>Assist in the drawing-up of training strategies for field and laboratory</td>
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<tr>
<td>officers;</td>
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<tr>
<td>Assist in the setting up of registers at wineries;</td>
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<tr>
<td>Assist in the setting up of an experimental station;</td>
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<tr>
<td>Advise and ensure that implemented system is in line with Council</td>
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<td></td>
</tr>
<tr>
<td>Regulation 1493/1999 and Rural Development Regulation;</td>
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</tr>
<tr>
<td>Assist in the organisation of seminars and training workshops for wine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>growers and producers.</td>
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<td></td>
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Oenology Project
### IMPLEMENTATION TIME SCHEDULE

**OENOLOGY PROJECT**

CRIS REF. 4573/05

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<thead>
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<td>Q2</td>
<td>Q3</td>
</tr>
<tr>
<td>All components</td>
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<td>T</td>
<td>T</td>
</tr>
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**D:** DESIGN  
**T:** TENDERING AND CONTRACTING  
**I:** IMPLEMENTATION  
**C:** CLOSURE
## ANNEX III

**CUMULATIVE CONTRACTING AND DISBURSEMENTS**

**SCHEDULE OF EU FUNDING**

**OENOLOGY PROJECT**

(Euros ‘000)

CRIS REF. 4573/05

<table>
<thead>
<tr>
<th>DATE</th>
<th>2003</th>
<th></th>
<th>2004</th>
<th></th>
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<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
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<td>350</td>
</tr>
<tr>
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<td>50</td>
<td>100</td>
<td>200</td>
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