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**Fourth Minnesota Padova Conference on
Food, Agriculture, and the Environment**

Proceedings of a Conference Sponsored by
University of Minnesota
Center for International Food and Agricultural Policy

Universita degli Studi di Padova
Dipartimento Territorio e Sistemi Agro-forestali

Regione Veneto

Ente di Sviluppo Agricolo

**SESSION IV: THE QUALITY OF AGRICULTURAL PRODUCTS
AND HUMAN HEALTH**

**PAPER 5: ON FARMS QUALITY METHODS AND
SELF REGULATION**

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ON FARMS QUALITY METHODS AND SELF REGULATION

Tommaso De Marco

E.S.A.V. - Padova

INTRODUCTION

The new European agricultural policy has pushed the farmers through a new reality "the need to produce for the market".

In the past the farmers looked only to production because there was "the system" guaranting a minimum price for everything they were producing (consequently an income).

Today the situation is different and slowly the farmers must change the mentality and the way of working in order to avoid to be turned out from the production system.

WHY THE TOTAL QUALITY

In the EEC the today and tomorrow farm organization needs an accurate management on many factors .

This complicated management, expecially in the Veneto Region it's difficult to manage for the armers without adequate tools that are able to include all factors in a simply system. From this our attempt to apply the Total Quality System to one of our farms and try to obtain a model for all the others.

FARM MANAGEMENT

- COSTS
- YIEALDS
- ORGANIZATION
- TIMING
- ENVIRONMENT
- TECHNOLOGY UPDATE
- ETC...



**IMPOSSIBLE TO BE
COMPETENT IN ALL**



**THE NEED OF STANDARD
PROCEDURES**

E.S.A.V.

The Total Quality methods allow to close in standard procedures a very complex world that include many interspecific factors translating them in easy rules and procedures.

The succes of the T.Q. is based on the farmers' awareness of the self regulation.

DIANA FARM

The need for the introduction of the T.Q. in the farm born from the decision to turn to account the farm's wet production

The cereal stocking system in Italy is unorganized to exploit the different weat production (is unable to stock separately the different qualities) and consequently is not able to give to the farmers the information coming from the further processing Company. We have then decides to contact directly an end user

Company and we agreed on qualitative parameters.

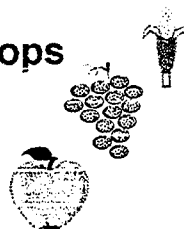
T.Q. HELPS TO:

- Increase efficiency of Company processes
- Consolidate farm's technical know-how
- Draw production planning to market needs
- Speed up application of new technologies

F S A V

DIANA FARM

- Surface = 100 Ha
- Extensive crops
- Vineyard
- Fruityard
- Horticulture



E.S.A.V.

WEAT QUALITY

| USE | PROTEIN CONTENT | STRENGHT W | ELASTICITY P/L | DOUGH STABILITY | FALLING NUMBER |
|-----------------------------|-----------------|------------|----------------|-----------------|----------------|
| Panettone Ind. cakes | >14,5 | > 300 | < 1 | > 15 | > 250 |
| Artisan bread Cookies | >13,5 | 200-300 | 0,4-0,6 | > 10 | > 220 |
| Industrial bread | >11,5 | 160-220 | 0,4-0,6 | > 5 | > 220 |
| Biscuits | >10,5 | < 120 | 0,3-0,5 | -- | > 220 |

E.S.A.V.

Studying deeply these parameters, we realized that to reach the quality for Panettone or artisan bread in the farm's production was not so easy. We started to work out some standard production procedures, that took into consideration all the influencing factors including the meteorological ones.

At this point we realized that this was still not enough because to have everything on hands we had to include many other factors (chemical products, equipments, machinery running etc.). Finally we decided that probably was better to start applying the T.Q. model to the Diana farm.

After that we started writing the T.Q. manual for this farm of which we detail here under the index.

OBJECTIVES

- To realize a standard methodology
- To obtain a REAL change in DiANA farm
- To focus the farmer activity on real market/user needs
- Realize the continuous improvement

E.S.A.V.

THE PROGRAM PHASES

- Definition of fields' intervention
- Definition of critical areas
- Build up of working groups
- Developement of working groups
- Results implementation

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1) FARM STRATEGY

- 1.1 Referring picture
- 1.2 T.Q. policy
- 1.3 Definitions
- 1.4 Farm's description and production scheme

2) ORGANIZATION STRUCTURE

- 2.1 Identification and working sectors
- 2.2 Organization chart
- 2.3 Duty and responsibilities
- 2.4 Technical responsibilities
- 2.5 Procedure for confidential information
- 2.6 Personnel training

3) FARM EQUIPMENT MANAGEMENT

- 3.1 Farm equipment list
- 3.2 Equipment identification
- 3.3 Equipment checking list
- 3.4 Equipment maintenance
- 3.5 Farm map
- 3.6 Purchasing policy

4) ENVIRONEMENT

- 4.1 Environmental peculiarity
- 4.2 Auditing
- 4.3 Farm access

5) CULTURE STANDARD PROCEDURE

- 5.1 Standard procedure (Good Farm Practice)
- 5.2 Checking list
- 5.3 Historical production data
- 5.4 Meteorological influence

6) T.Q. MANAGEMENT

- 6.1 T.Q. documentation
- 6.2 Data recording
- 6.3 Data filing

7) WAREHOUSE MANAGEMENT

- 7.1 Receipt and identification of row material
- 7.2 Protection and prevention
- 7.3 Stocking

8) AUDITING AND PROPOSALS

- 8.1 Inspection
- 8.2 Auditing
- 8.3 Management proposals
- 8.4 Complaints

Now we are at the most difficult point: to turn around the Diana farm culture.

HOW TO REALIZE

- **Exploitation of human resources**
- **Improvement of worker abilities**
- **Draw attention to possible synergies**
- **Application of "prevention concepts"**
- **Study the industrial process and the feed back system**

E.S.A.V.

CONCLUSION

We feel that the adoption of T.Q. methods in the farms is today the most efficient tool to help the change of mentality and increase the efficiency and farm's competitiveness.

The T.Q. allows:

- To reach the goal to minimize the farm cost (cost of non quality) and increase the efficiency of the company processes.
- To maximize the income in a medium/long view terms.
- To consolidate the farm's technical know-how and to better adjust the production to market needs and new technologies.