

Lubiana (SLO)  
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**Integrated Pest Management  
in Italy**

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# **E.U. Agroecological Measures in Italy**

<b>Area</b>	<b>A.S.U.</b>	<b>000 ha</b>
<b>North</b>	<b>5.123.773</b>	<b>371.951</b>
<b>Centre</b>	<b>2.679.028</b>	<b>390.968</b>
<b>South &amp; Islands</b>	<b>6.882.464</b>	<b>203.998</b>
<b>Total</b>	<b>14.685.448</b>	<b>966.917</b>

**Early 2000**

# **E.U. Agroecological Measures in Italy**

**In the last years at the end of E.U. funds:**

- heavy reduction of I.P.M. surface under contract
- increase of I.P. Guidelines usage: strongly requested by the market

# Integrated Production in Italy

<b>Rules</b>	<b>Benefit for farmers</b>	<b>Tools</b>
<b>Reg. EU 1257/99</b>	<b>Financial support</b>	<b>Guidelines for:</b> <ul style="list-style-type: none"><li>• <b>pest &amp; disease control</b></li><li>• <b>weed-killing</b></li><li>• <b>Fertilization</b></li><li>• <b>Irrigation</b></li></ul>
<b>Reg. EU 2200/96</b>	<b>availability of qualified technicians</b>	

# **Integrated Production in Italy**

- Production of high quality organoleptic and healthy food**
- Priority to ecological and safety growing methods**
- minimize the disadvantages of chemical application to protect farmers and consumers health**
- Maintaining an acceptable farmer's income**

# **Pest and disease control**

**Strategies aiming to balance the efficacy of the chemical application and the protection of the environment, reducing the risk for workers, and increasing high quality and healthy products for the consumers**

# **Pest and disease control**

**Strategies are defined for every crop in order to prevent or contain pests and diseases by using agronomic, biological, biotechnological and limiting the number of chemical application**

# Pest and disease control

## Limitation or avoidance of chemical use are based on:

- **Toxicology**
  - (Risk sentences and toxic marks on the label)
- **Environment**
  - (negative effects on no-target organisms, waterflows, soil and persistence in the environment)
- **residues on treated crops**
- **selectivity for beneficials**
- **risk of resistant populations**

# **Italian procedure for the definition of I.P.Guidelines**

**General principals and criteria defined by E.U. and recognized by Minister of Agriculture and Regional Governments.  
Decision n. 96/3864 of U.E. STAR Commitee on 31/12/96**

**I.P. guidelines are proposed by the Regional governments**

**Evaluation  
National Technical-Scientific Committee  
"I.P.M."**

**Management and control by official institutes  
(in turn controlled by the E.U.)**

**Implementation by Producers Organizations and Farmers**

# **GENERAL I.P.M. CRITERIA**

**Decision n. C(96) 3864**

**of**

**E.U. STAR Committee**

**on 30/12/96**

# *National Scientific Committee composition*

- **Ministry of Agriculture**
- **Istit. Sper. Patologia Vegetale**
- **Istit. Sper. Zoologia Agraria**
- **Experts of all the italian regions**

# **Iter per la definizione delle norma tecniche**

**Regional proposals of technical rules sent to MiPAF**

**Committee evaluation**

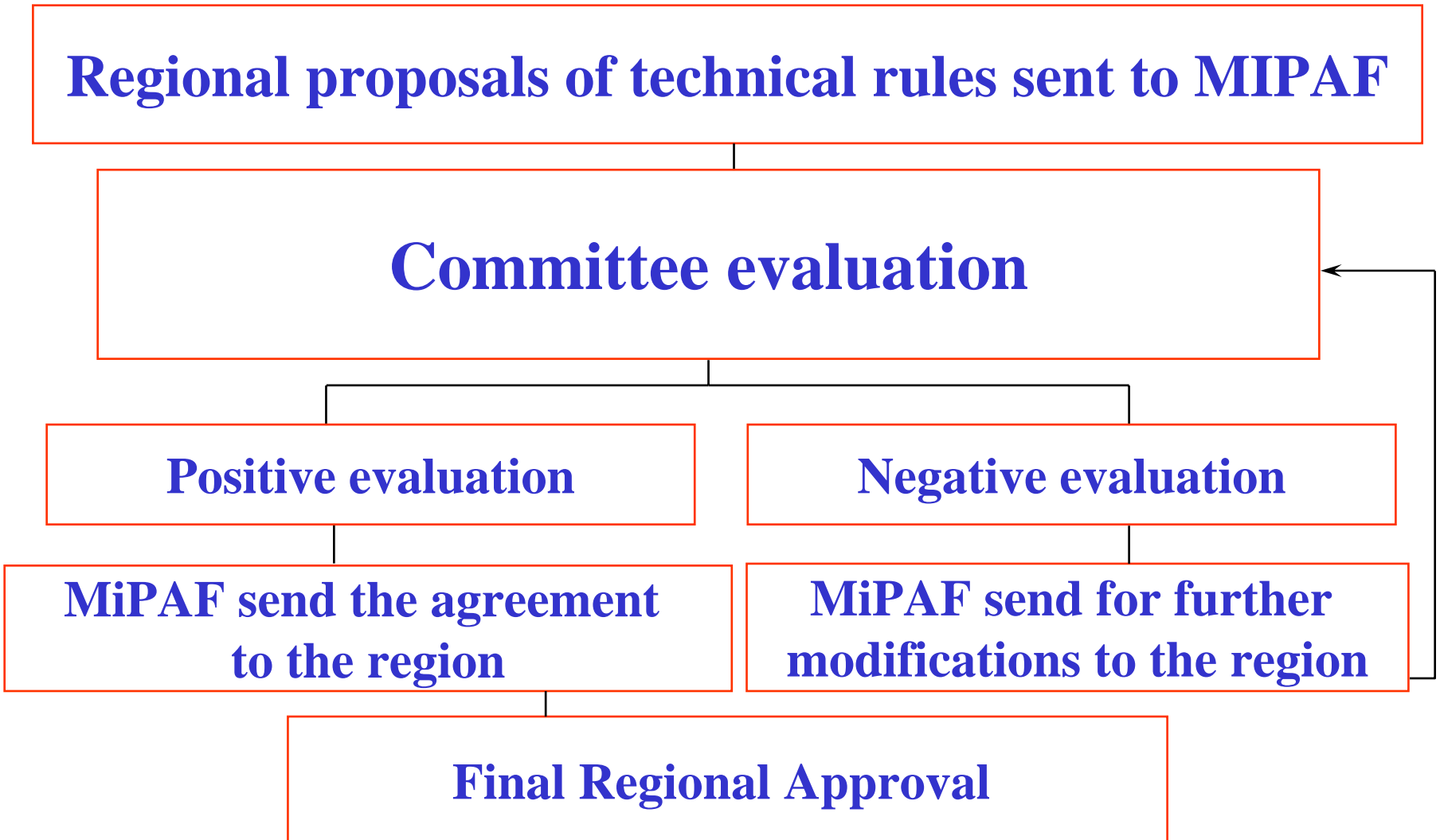
**Positive evaluation**

**Negative evaluation**

**MiPAF send the agreement  
to the region**

**MiPAF send for further  
modifications to the region**

**Final Regional Approval**



# **I.P. general CRITERIA**

## **"U.E. Decision" - N. C(96) 3864 on 30/12/96**

**Promotion of I.P.M. strategy aiming to minimize the chemical impact for the human being and the environment and obtain economically acceptable productions**

**"Integrated production" IOBC/WPRS**

**Development of the most correct I.P.M. strategy based on:**

**Choice of the optimal time**

**Criteria for pest control**

**Criteria for disease control**

**Criteria for weed control**

**Rationalization of the pests and disease control methods**

**Qualitative selection of the chemicals**

**Optimization of the chemical amount distributed and distribution methods**

# CRITERIA FOR DISEASE CONTROL

**Omogeneous area evaluation**

**Choice of the most suitable strategy**

**Forecasting models**

- Host-pathogen-climate interactions
- Aerobiological monitoring

**Valutazioni previsionali**

**Correlation between climate and pathogen**

**Diagnosis**

- Symptoms outbreak
- action threshold

# CRITERIA FOR PEST CONTROL

**Omogeneous area  
evaluation**

**Target and secondary pest  
definition**

**Monitoring methods**

**Damage evaluation**

**Action threshold  
determination**

**Beneficial determination**

**Pest/beneficial ratio**

**Surveying methods**

**Pest sensitivity to a.i.**

**Choice of the most  
suitable strategy**

**Population dynamic**

**Severity**

**Analysis of other pest  
populations**

**Analysis of beneficials**

**a.i.'s mode of action**

**Climate and forecasting**

# CRITERIA FOR WEED CONTROL

```
graph TD; A[CRITERIA FOR WEED CONTROL] --- B[Choice of strategy based on: weed target-oriented, post-emergence application preferred]; A --- C[ ]; C --- D[Prediction of floral composition]; C --- E[Evaluation of weeds actually present in the field];
```

**Choice of strategy based on:**

- **weed target-oriented**
- **post-emergence application preferred**

**Prediction of floral composition**

**Evaluation of weeds actually present in the field**

# QUANTITATIVE CHEMICAL REDUCTION

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graph TD; A[QUANTITATIVE CHEMICAL REDUCTION] --- B[reduced dosages]; A --- C[Localized application]; A --- D[Use of activators]; A --- E[Efficient distribution equipments]; A --- F[Good seedbed preparation]; A --- G[Weed conditioning];
```

reduced dosages

Localized application

Use of activators

Efficient distribution  
equipements

Good seedbed  
preparation

Weed conditioning

# Qualitative selection of control methods

**Efficacy**

**Priority to low  
impact methods**

- choice of resistant/tolerant cvs
- Use of healthy plants/seeds
- Agronomic measures:  
(rotation, fertiliz., irrigation)
- Physical methods (solarization)
- Biotech. meth: (pheromones)
- Biological method: (beneficials)

**Biological methods  
and products**

**all the products  
admitted by Reg.E.U.  
2092/91  
and regularly  
authorized in Italy**

**Criteria for  
a.i. selection**

**Short and long term  
toxicity for humans**

**Environmental impact**

**Chemical residues**


**Selectivity for beneficials**

## **Framework of technical guidelines proposed by the regions**


**For every crop the followings are defined:**

- **Target pest/disease**
- **Action threshold for chemical application (based on severity/damage level)**
- **A selection of chemicals that can be used to control the pest/pathogen**
- **Notes, suggestions and limitations about the use of chemicals**

# "FORMULATION SELECTION"

 Formulations classified as T, T+ e Xn should be avoided or limited

# "FORMULATION SELECTION"

 **Formulations with the following risk sentence on the label R40, R68, R61, R62, R63 should be avoided or limited**

# “Formulation selection”

**When formulations with the same a.i. are available, those with lower toxicological rank (NC e/o Xi) are preferred.**

“Next Year”

**“National IPM Guidelines”**