



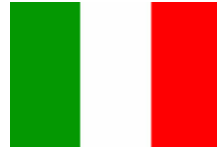
Regione
Sicilia



Regione
Abruzzo



Regione
Puglia



Giornate Fitopatologiche – Workshop Endure

Bologna 5 novembre 2009

L'applicazione dell'IPM in Italia IPM implementation in Italy

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- Anna Angela Saglia (Phytosanitary Service – Regione Abruzzo)

IPM EVOLUTION



Mid '70s

Important IPM experiences in some regions thanks to the scientific academic support

1987

National Plan
"Integrated pest and disease control strategy"
(3 - 5 years)

IPM EVOLUTION



Early 1996

Adoption of Reg. CEE n. 2078/92"

Problems with European Commission:

- First approval of not harmonized guidelines
- Problems to justify the subsidies



Benefit Definition:

- Reduction of the amount of PPP applied
- Reduction of risk for farmers, consumers and environment due to PPP application



Justification and parameterization of the subsidies on the basis of yield reduction or increased production costs

IPM EVOLUTION



Agreements among

- ❑ European Commission
- ❑ Italian Ministry of Agriculture
- ❑ Regions



Definition of the framework with principles and criteria of IPM and integrated weed control

Identification of an institutional body in order to guarantee the respect of the IPM principles and criteria



**"CE Decision of Star Committee" -
N. C(96) 3864 of 30/12/96
Principles & criteria of IPM
and integrated weed control**



**Set up of:
"National Scientific and
technical Committee"
M.D. n.6750 of 5/9/1996**



General framework

PRINCIPLES & CRITERIA

National IPM Committee
(IPM working group in the National IPM Committee)

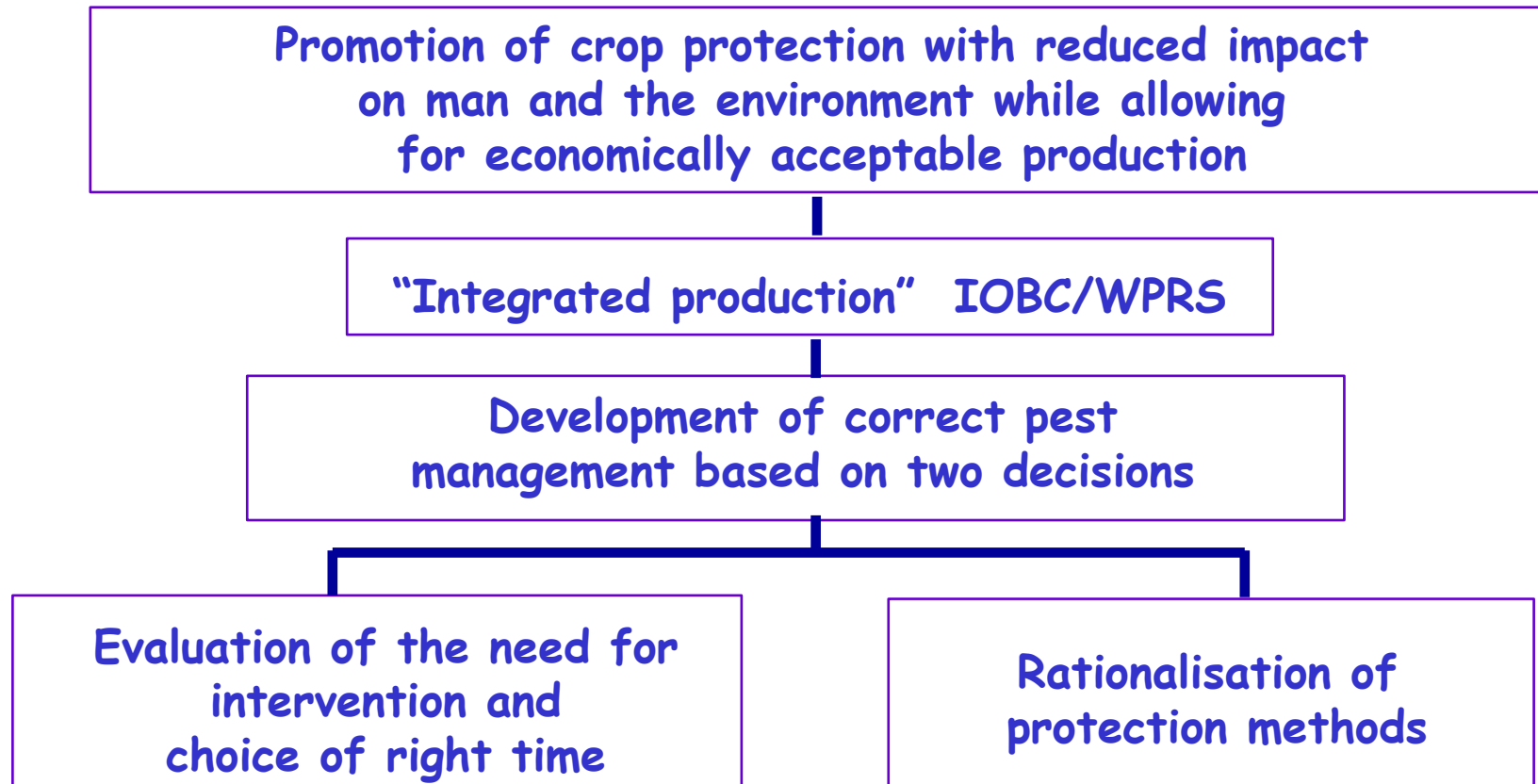
REGIONS

- Supervise the application of IPM Guidelines
- Supervise and partially carry out research and experimentation
- Manage technical supports
- Finance field technicians and farms

Principles and Criteria in IPM



"EC Decision" - No. C(96) 3864 dated 30/12/96





Limitations of the use of agrochemical products are based on:

- ✓ **toxicological issues**
(Risk phrases: R40, R60, R61, R62, R63, R68, R48)
- ✓ **environmental issues**
(negative effects on non-target organisms, water, land and persistence in the environment)
- ✓ **carry-over effect and residues in foodstuffs**
- ✓ **selectivity towards beneficial organisms**
- ✓ **risk of selecting resistant populations**



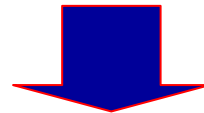
COMMITTEE MEMBERS

- ✓ Experts of all Regions
- ✓ CRA Centro di Ricerca per la Patologia Vegetale
- ✓ CRA Centro di ricerca per l'agrobiologia e la pedologia
- ✓ Mi.P.A.F.

National IPM Committee



- National Committee for IPM (since 1997): verifies coherence of regional regulations with IPM principles and criteria
- “National Guidelines for IPM” defined by the National Committee for IPM for 117 crops
www.politicheagricole.it/SviluppoRurale



- ✓ Voluntary certification of integrated production:
UNI regulation no. 11233 of 3 May 2007
- ✓ National system for integrated production quality:
D.M. no. 2722 of 17 April 2008

IPM implemetation



Italian Regions

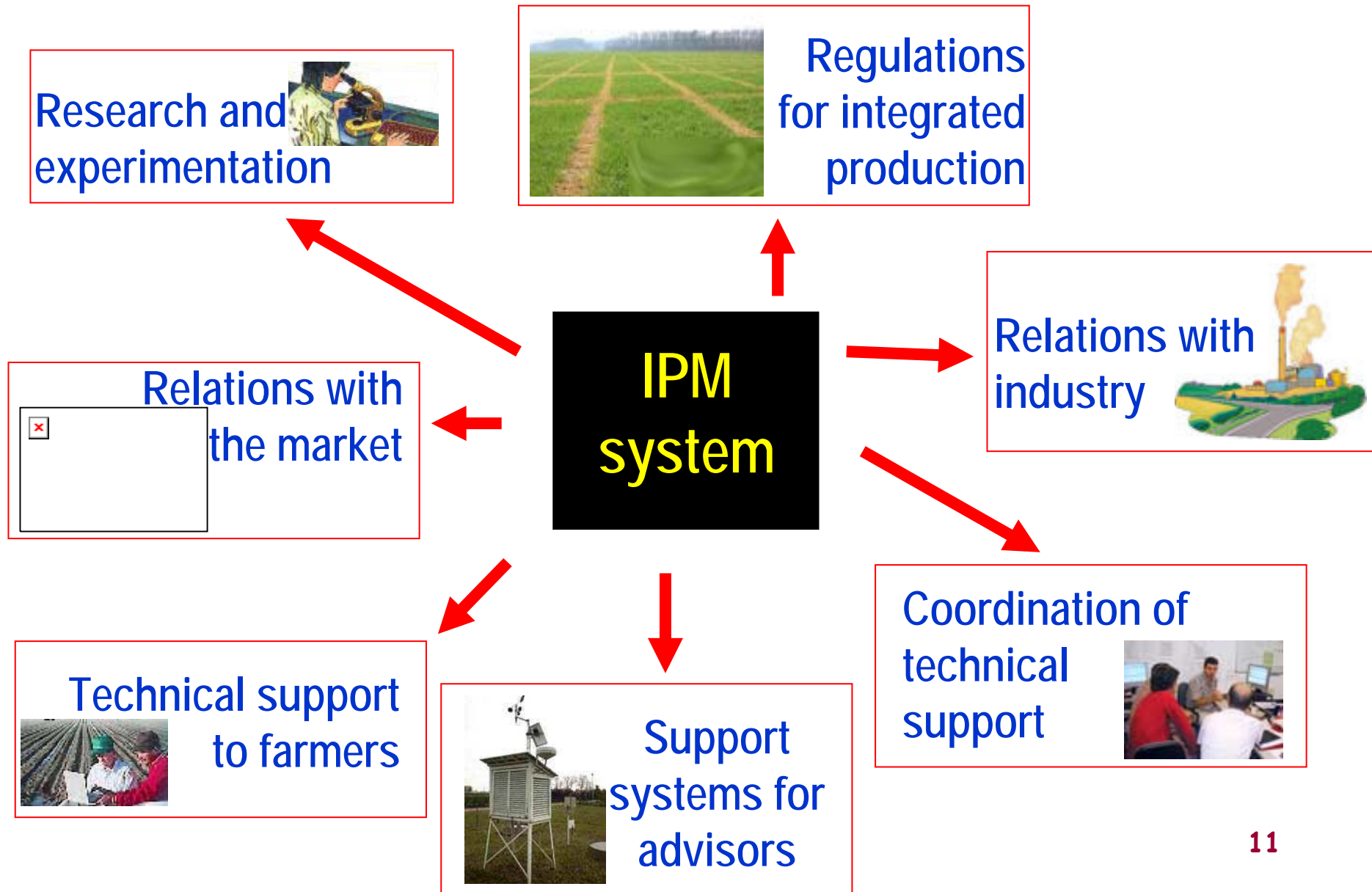


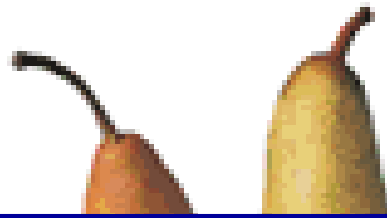
In Italy: 19 Regions and 2 Autonomous Provinces

Every Region independently decides its agricultural management and has to solve its technical problems

Consequently each Italian region has its own organization to programme and apply IPM

Regional system - Components of IPM system



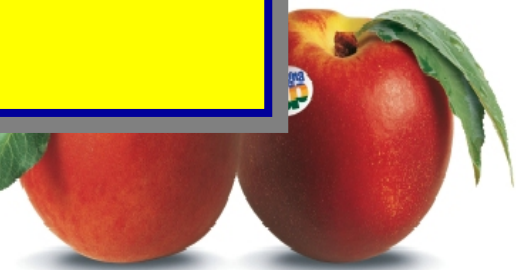


A single system
for every aspect regarding IPM:

REGIONAL IPM



Private	
AFE	
AGRIBOLOGNA	
AINPO	
APO CONERPO	
APOFRUIT IT,	
ARP	
ASIPO	
CHIARA	
CICO	
CIO	
CIOP	ROMANDIOLA
COPADOR	VEBA
EUROPFRUIT	
MODENESE	
ESSICAZIONE	FUNGHI delle TERRE
FRUTTA	di ROMAGNA



IPM and marketing

Total estimated influence on
70% of horticultural land

Integrated production is now
a pre-requisite
for the large-scale retail trade

- Residual herbicides are not allowed in orchards
- Pre-emergence herbicides are not allowed on wheat
- Minimum label rates are applied for the herbicides

IPM - PPP restrictions based on chronic risk

IPM - Regulation	INSECTICIDES				
	Active ingredient	R 40	R 60 - 62	R 61 - 63	R 68
Not in use	Propargite	X		X	
	Spyridiclofen	X			

IPM - Regulation	HERBICIDES				
	Active ingredient	R 40	R 60 - 62	R 61 - 63	R 68
Not allowed	Bromoxinil			X	
	Chlortoluron	X		X	
	Diuron	X			
	Isoproturon	X			
	Molinate	X	X		
Only Xi formulation and only corn	Isoxaflutole			X	
Only onion	loxinil			X	
Only rice	Bensulfuron-methyl			X	
In few crops	Clorprofam	X			
	Fluazizop-p-butyl			X	
Only on beans, green beans, carrots, fennel, pea	Linuron	X	X	X	
In IPM	Propizamide	X			

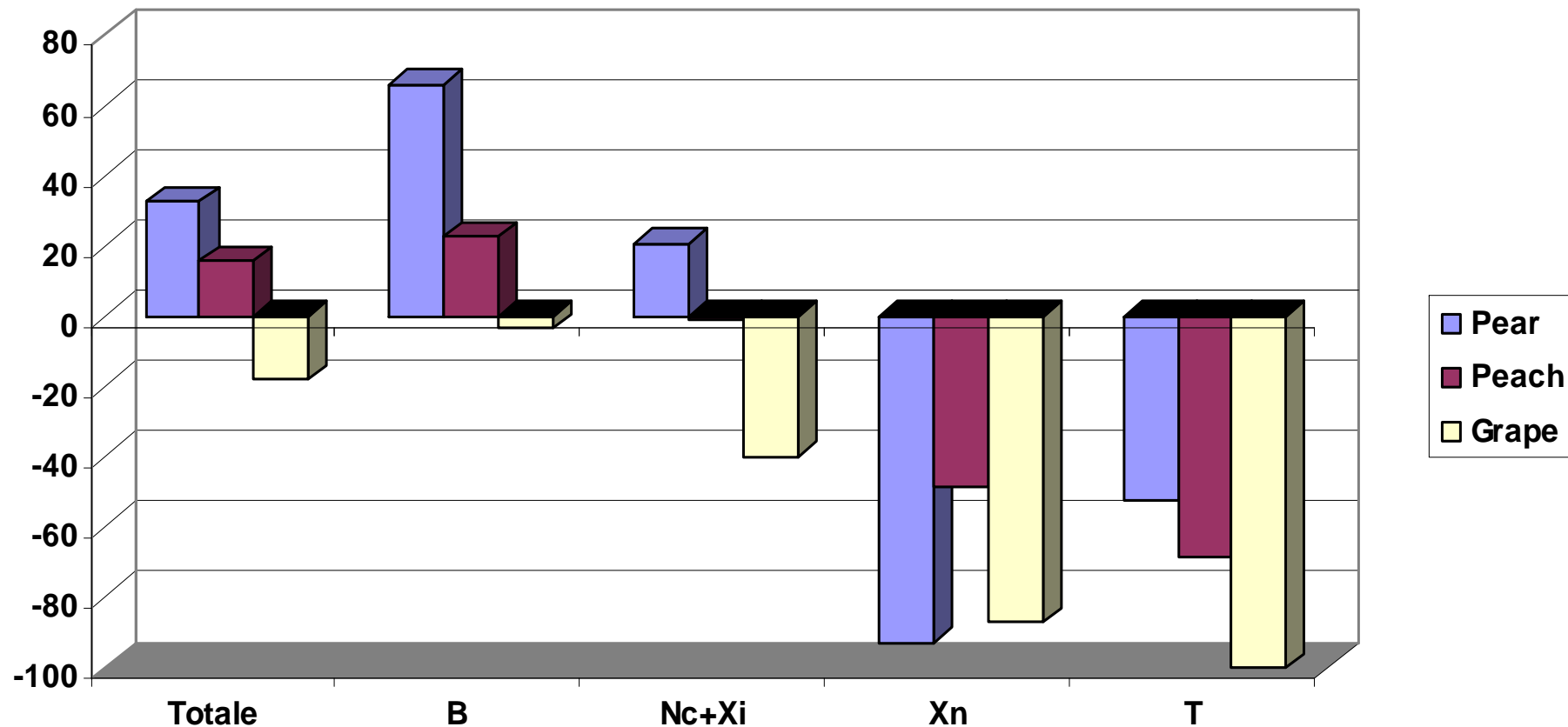
IPM - PPP restrictions based on chronic risk

IPM - Regulation	FUNGICIDES				
	Active ingredient	R 40	R 60 - 62	R 61 - 63	R 68
Not allowed	Bromoconazole			X	
	Clorotalonil	X			
	Dinocap			X	
	Epoxiconazole	X	X	X	
	Fenarimol		X	X	
	Fluasilazole	X		X	
	Folpet	X			
	Kresoxim-methyl	X			
	Protioconazole			X	
	Carbendazim	X			
Only Xi formulation	Ciproconazole			X	
	Myclobutanil			X	
	Tebuconazole			X	
Only peach and post harvest	Tiofanate methyl				X
Peach only in winter - Pear and apple only 2 time/year	Captan	X			
Only 1 time/year pear, cabbage	Iprodione	X			

- ✓ Some measures of the new directive are anticipated:
- check-up of atomizers
 - notification of the chemical applications in the book of treatments
 - training of farmers and authorization to purchase and use of very toxic PPP (35,000 licences)

IPM - Some results

**Impact evaluation of IPM programme
(toxicity class of insecticides) 2003
Differences as % between IPM farms and traditional ones**



- According to the crop, 20-35% reduction in the amount used, without substance in use in organic farming
- Reduced impact on humans and the environment:
 - between 70 and 90% reduction in pesticides with high acute toxicity
 - between 40 and 95% reduction in pesticides with high chronic toxicity
- strict respect for residue limits

IPM - Some results: Application of biological products

- Apple & pear (roughly 32,000 ha)
 - Spread of *Antochoris nemoralis*
 - roughly 35,000 doses/ha/year of granulosis virus for codling moth control
 - 800 ha treated with entomopathogenic nematodes for codling moth control
 - 6,000 ha using mating disruption technique
 - Use of *Bacillus subtilis* based products
- Peach (roughly 30,000 ha)
 - 24,000 ha using mating disruption technique
- Other crops:
 - mating disruption largely used
 - beneficial insects largely used in field and greenhouse
 - *Bacillus thuringiensis*, *Bacillus subtilis*, *Trichoderma*, Azadiractin ecc. largely used

IPM - Some results: Application of biological products

- Apple & pear (roughly 32,000 ha)
 - Spread of *Antochoris nemoralis*
 - roughly 35,000 doses/ha/year of granulosis virus for codl
 - 8
 - codl - Monitoring network
 - 6
 - U - met-station network
 - Pec - Forecasting models
 - 2 - Pheromone traps for adult monitoring
 - Otl
 - mating disruption largely used
 - beneficial insects largely used in field and greenhouse
 - *Bacillus thuringiensis*, *Bacillus subtilis*, *Trichoderma*, Azadiractin ecc. largely used

Effect of application (Dir. 91/414) on IPM in Emilia-Romagna (Survey on DPI 2004 - 2007)

Active ingredient	Apple		Pear		Peach	
	Conventional	IPM	Conventional	IPM	Conventional	IPM
Number in 2004	141	59	177	56	113	51
Number in 2007	110	66	100	59	93	57
OUT - Annex I	45	10	89	9	32	10
% Reduction	32	17	50	16	28	20
New	14	10	12	10	13	10

IPM - Future

"Directive aiming to determine an E.U. framework on the sustainable use of pesticides"

IMP - COMPULSORY LEVEL:

- We would like to increase basic studies, basic guidelines and extension service:
 - Weather Service
 - Forecasting Service for the most important diseases and pests
 - Disease and pest monitoring Service
 - Coordination of the warning activities
 - Farm information planning

IPM - Future

"Directive aiming to determine an E.U. framework on the sustainable use of pesticides"

IPM - VOLUNTARY LEVEL:

We would like to increase our IPM system where we have more attention on quality of the pesticides

IPM - Some considerations



Italian IPM experience can be considered remarkable in terms of:

Results obtained

Results measurable

Spread of the results

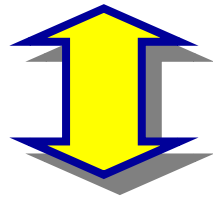
Remarkable also was the approach:

All the system's components worked synergically together in order to focus all the efforts to a single target:

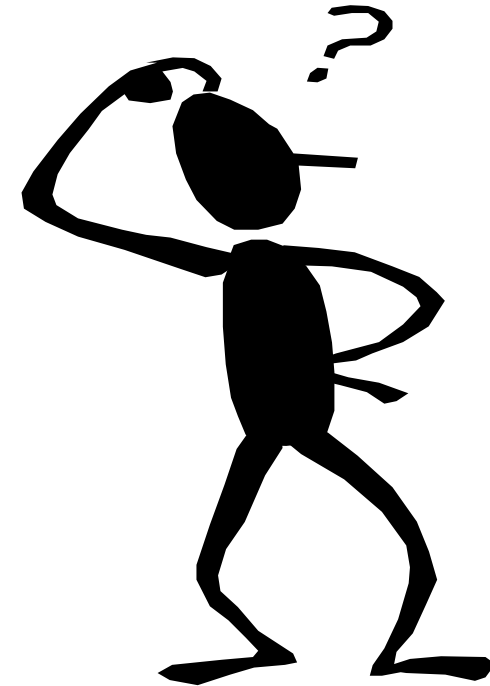
**Spread the IPM and
make it measurable and sustainable**

Italy IPM ↔ Endure

Endure is not only a research network but it could be a strategic point for IPM policy in Europe



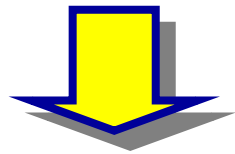
In Italy IPM application represents nowadays a remarkable reality



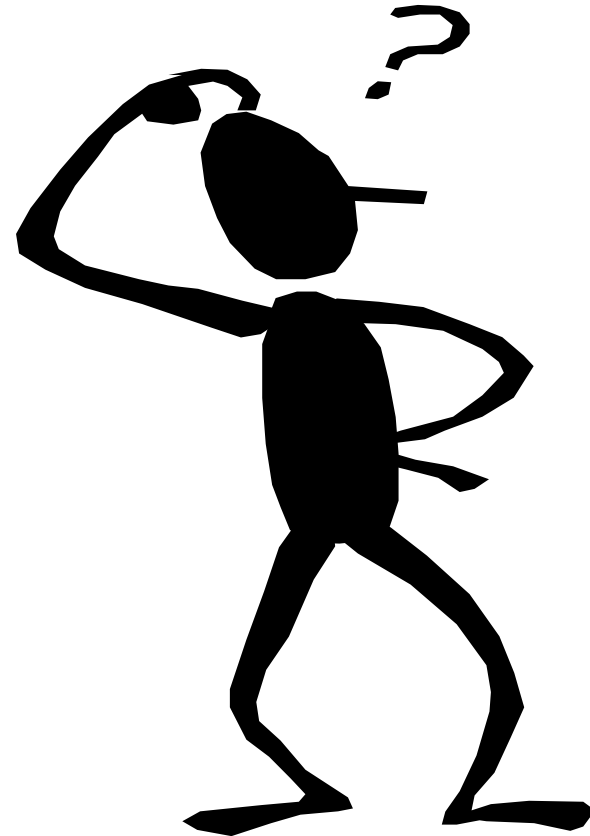
How can such reality be put in relationship with Endure in a constructive and balanced way ?

Italy IPM ↔ Endure

Hard work and willingness
is surely needed



Structural solutions
will be more useful



Italy IPM ↔ Endure

First hypothesis

To set up
"Intermediation Unit"
having constant relationship
with Endure Results and
promote their diffusion and discussion
at national level



Allocation at national level of funds
for competent Institutes
(ex. ISMEA, INEA, CRA PAT) (?)
and purposely organized

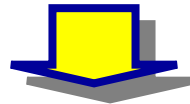
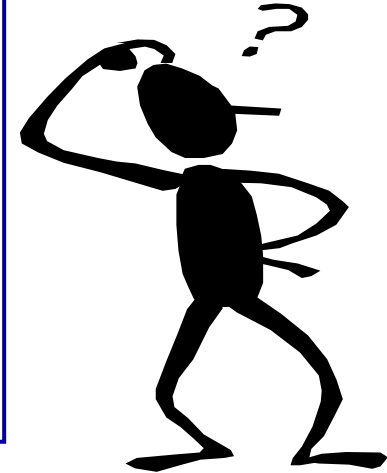
Italy IPM ↔ Endure

Second Hypothesis

Increase the Italian participation to the development of EU research programmes on IPM

KBBE.2010.1.2-06:

Deepened and enlarged cooperation in crop protection research programmes



- At national level:
 - synergic increase among all the research institutes.
 - promote a national body in order to improve the Italian participation to the EU Calls
- At E.U. level a more constructive behaviour is needed in order to favour the participation of southern European research institutes

Italy IPM ↔ Endure

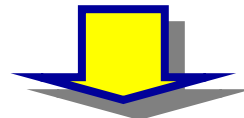
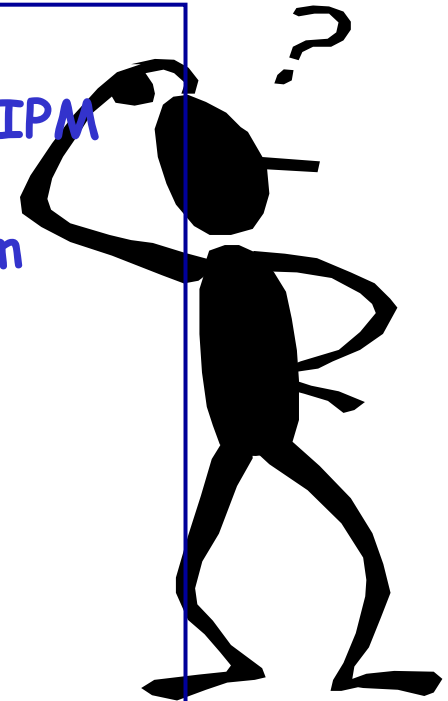
This is not enough



Italy IPM ↔ Endure

Third Hypothesis

- Endure considers the research world as pivotal for IPM Officials and IPM managers have been considered as main target but as a component outside the system
- IPM application in Italy showed that developing a global approach favouring the interactions among all the IPM system components (Research, Technical Assistance, IPM Officials) is very important



Useful would be to consider the "IPM manager" as one of the components to be directly involved in the network and in the new research programmes



Thanks... for your attention