

## Introduction

- Consumers are more aware of the presence and hazard / toxicity of pesticide residues in food
- This concern is also for the government, farmers and everyone involved
- The global population growth and the consequent intensification of agriculture has resulted in the proliferation of pests and diseases

## Objectives

- Introduce an informative way what are the pesticides and their residues. Highlight the issues involved
- Know their dangerousness, toxicity, as regulated, legislation, consumption, LMR, etc.
- Make a summary of everything related on the subject of pesticides

### 1. PESTICIDES

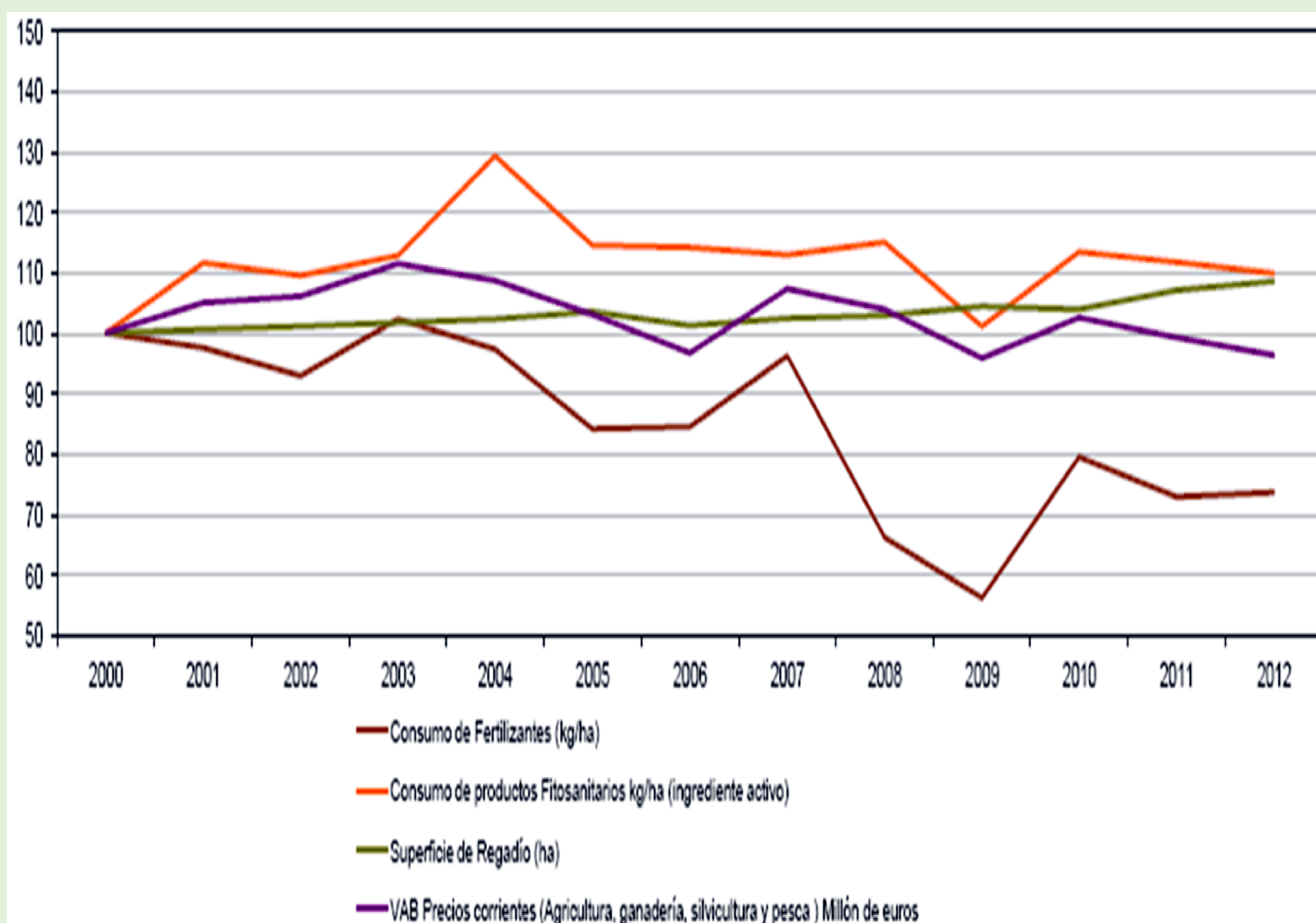
CHEMICAL FAMILY	EXAMPLES
Organochlorines	DDT, endosulfan
Organophosphorus	Malathion, bromophos
Carbamates	Carbaryl, methomyl
Thiocarbamates	Dithiocarbamate
Pyrethroids	Permethrin, fenvalerate

### 2. PESTICIDES RESIDUES IN FOOD

#### New Regulation nº 396/2005

Citrus	Tetradifon
Tomatoes	Malathion, carbaryl
frozen vegetables	Methamidophos, methomyl

Diffusion  
leaching  
evaporation  
volatility



#### FOUR MAIN OBJECTIVES OF THE PAN:

- ✓ Encourage Integrated Pest Management
- ✓ Reduce the risks and effects
- ✓ Improve training and information
- ✓ Promote research and innovation

#### Residues detected in fruit and vegetables in the EU in 2013

2.6% no ok

97.4% ok

54.6% no residues were detected

27.3% not reach the LMR

Exceed → strawberries, lettuces, apples, peach

No exceed → cabbages, tomatoes, pears, wines

	USDA pesticide data program	CDPR marketplace surveillance program	Consumers Union	Belgium
Conventional – percentage detected	73	31	79	49
Organic – percentage detected	23	6.5	27	12
Ratio – conventional/organic	3.2	4.8	2.9	4.1

Sources: Baker and others 2002; Pussemier and others 2006.

## Conclusions

- Pesticides are an important group of toxic hazards to consumers but the long-term toxicity still raises questions.
- Chemical control is done for reasons of efficiency, speed and economy.
- The regulation change was appropriate to improve on legislative aspects.
- The introduction of alternative methods should be progressively.