PESTICIDE RESIDUES IN FOOD

Guim Padrós Rusiñol, June 2016.

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

<table>
<thead>
<tr>
<th>CHEMICAL FAMILY</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organochlorines</td>
<td>DDT, endosulfan</td>
</tr>
<tr>
<td>Organophosphorus</td>
<td>Malathion, bromophos</td>
</tr>
<tr>
<td>Carbamates</td>
<td>Carbaryl, methomyl</td>
</tr>
<tr>
<td>Thiocarbamates</td>
<td>Dithiocarbamate</td>
</tr>
<tr>
<td>Pyrethroids</td>
<td>Permethrin, fenvalerate</td>
</tr>
</tbody>
</table>

2. PESTICIDES RESIDUES IN FOOD

- New Regulation nº 396/2005

- **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, apricots, peaches

No exceed ➔ cabbages, tomatoes, pears, wines

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.