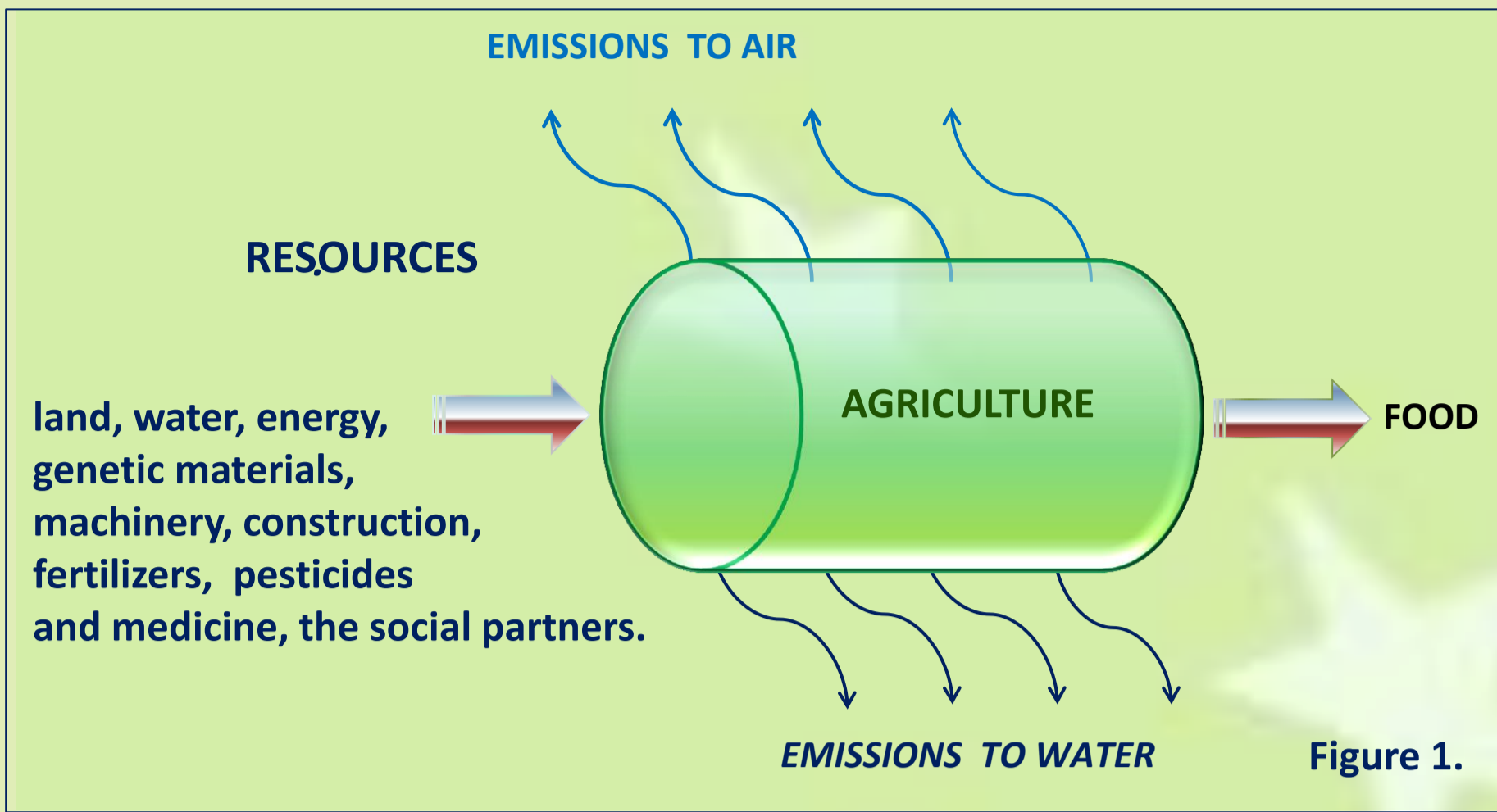




# Which future for agriculture in EU and Italy



Agriculture affects the environment in many different ways. The dynamics and links between the quality of the natural environment and farming practices are complex (Figure 1). For the production of food, feed and fiber, agriculture requires resources and releases substances/emissions leading to ecological impacts, including effects on human health, biodiversity loss and climate change. In particular, the pollution of soil, water and air, habitat fragmentation and wildlife breakdown can be heavily affected by agricultural practices and inappropriate use of the land. For this, EU policies, including the Common Agricultural Policy (CAP), are designed to prevent the risk of environmental degradation by means of encouraging farmers to play a more and more active role in the protection of the landscape and the environment with the adoption of sustainable rural development (Figure 2).

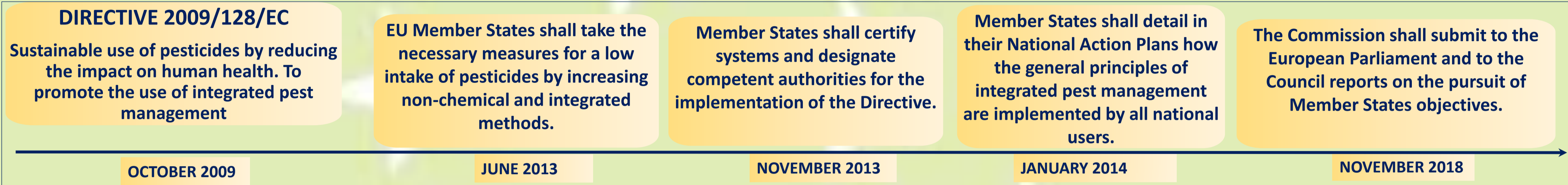


Figure 2. Time steps in the Directive appliance

## Agriculture with use of pesticides

Pesticides or phytosanitary products are all the products, synthetic or natural, used against the major diseases/pests of plants. According to the hazard to humans and animals, plant protection products are labeled by symbols of danger (Figure 3).

The use of fertilizers in agriculture, aimed at highly increasing productivity, can have significant environmental implications.

By considering the Europe, the EU27 countries, Belgium is the country where the highest amount of fertilizers is adopted (> 0.2 tons/ha on Utilized agricultural area), followed by Netherlands, Poland and Germany.

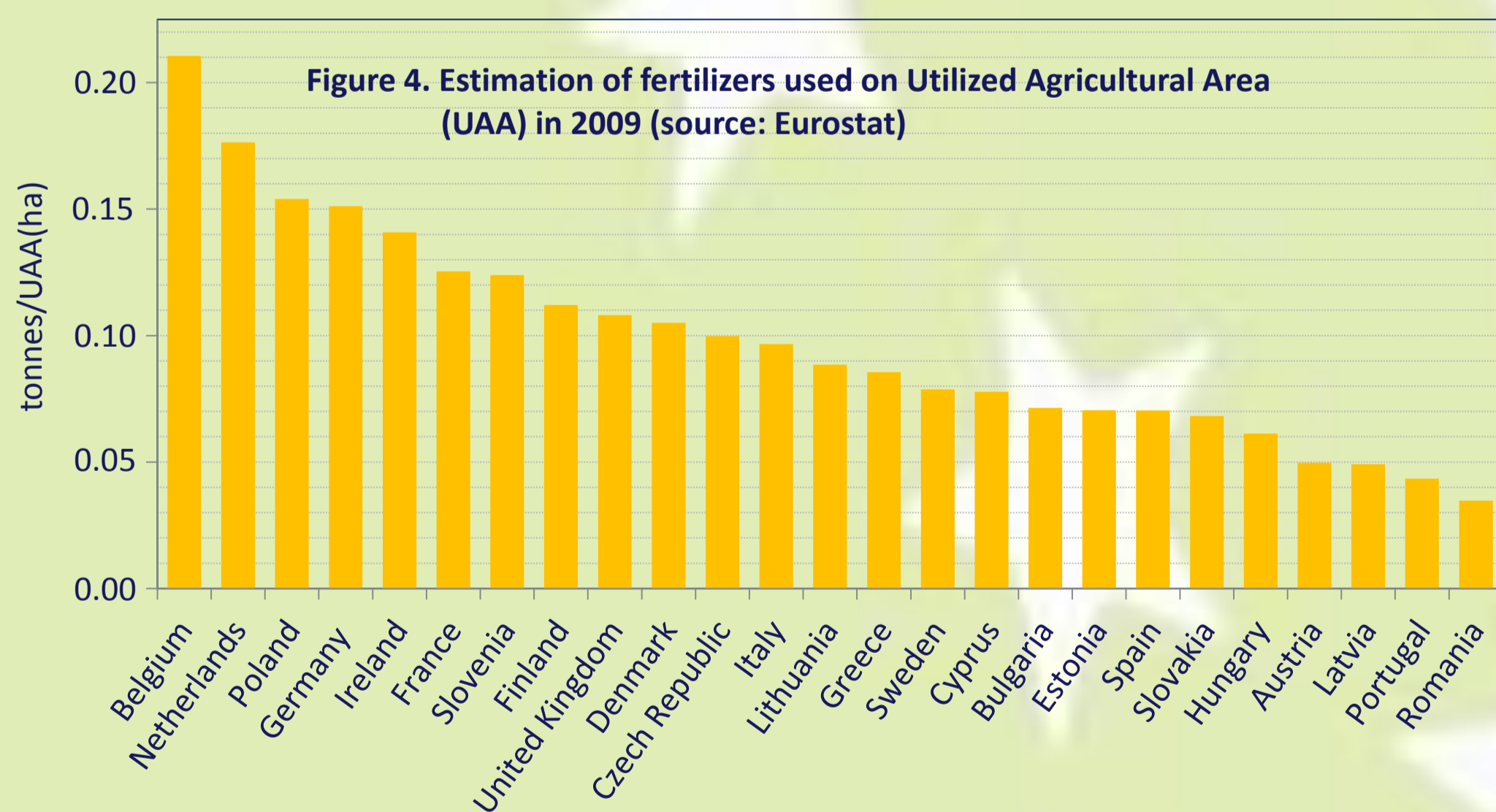
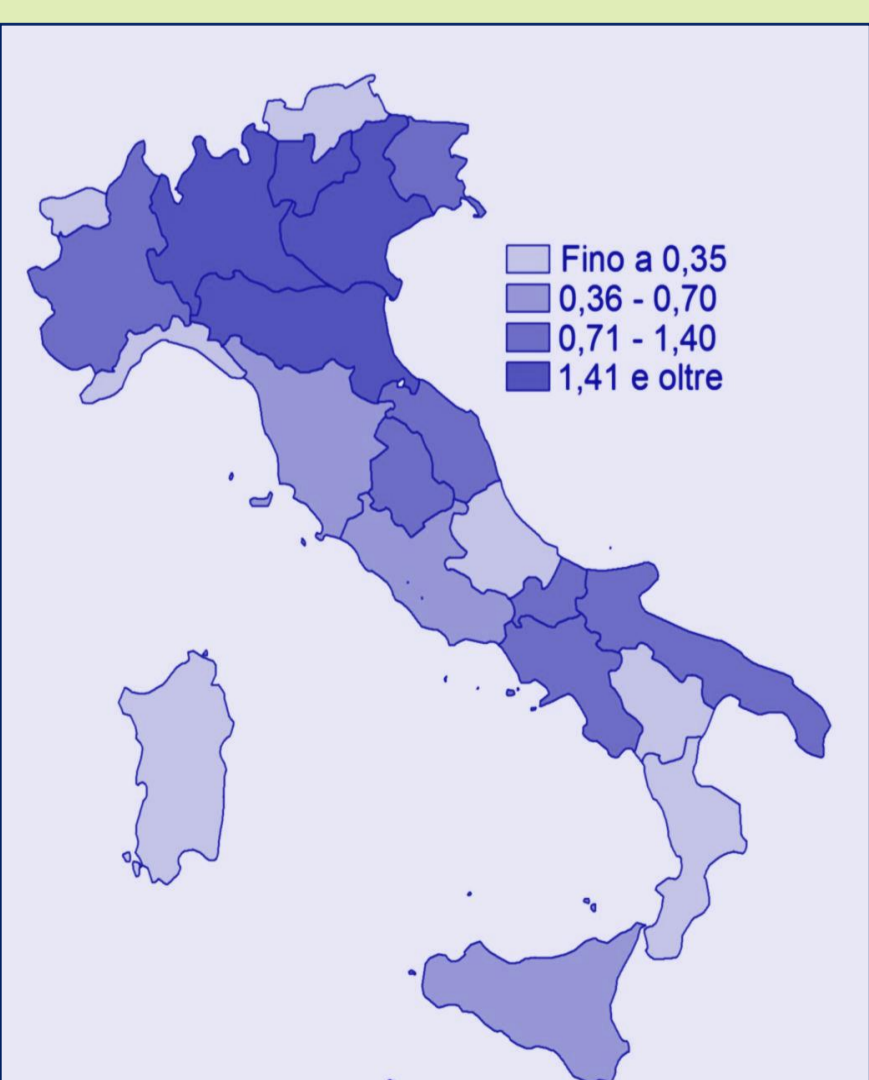


Figure 5. Distribution of fertilizers for agricultural use (q/ha) in Italy (Source: Istat, 2011)



In 2010, in Italy, about one quintal/ha of fertilizers was distributed on simple utilized agricultural area (UAA). The country higher values are registered in the North: in the area of Trentino, Lombardy, Veneto and Emilia Romagna. In the South-Italy: the highest values were recorded in Puglia and Campania, with 1.34 and 0.87 q/ha of UAA, respectively. On the whole, in South, the lower values were found in Sardinia and Calabria, in North, in the Valle d'Aosta and in the Alto Adige (Figure 5).

### By perspective

The future of agriculture shall take into account and integrate several indicators: quality and quantity, keeping of natural resources and increase in biodiversity, efficient use of water, invest and transfer knowledge and disseminate innovations. This significant walk in agricultural production is a need and a challenge for the human race!

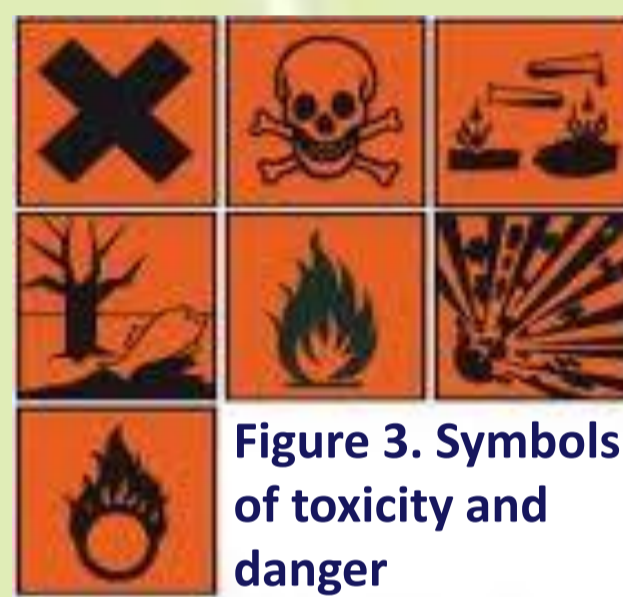
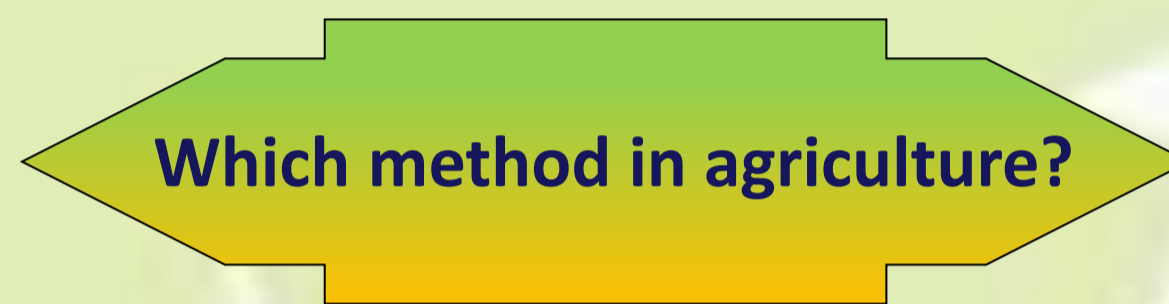


Figure 3. Symbols of toxicity and danger

## Organic Farming

Reduction to a minimum of the impact due to products on the environment allows the farmers to adopt the most sustainable strategies and techniques:

- crop rotation (Figure 5);
- no stress in the soil working;
- the presence of hedges;
- fertilization with organic material;



Figure 5. Crop rotation

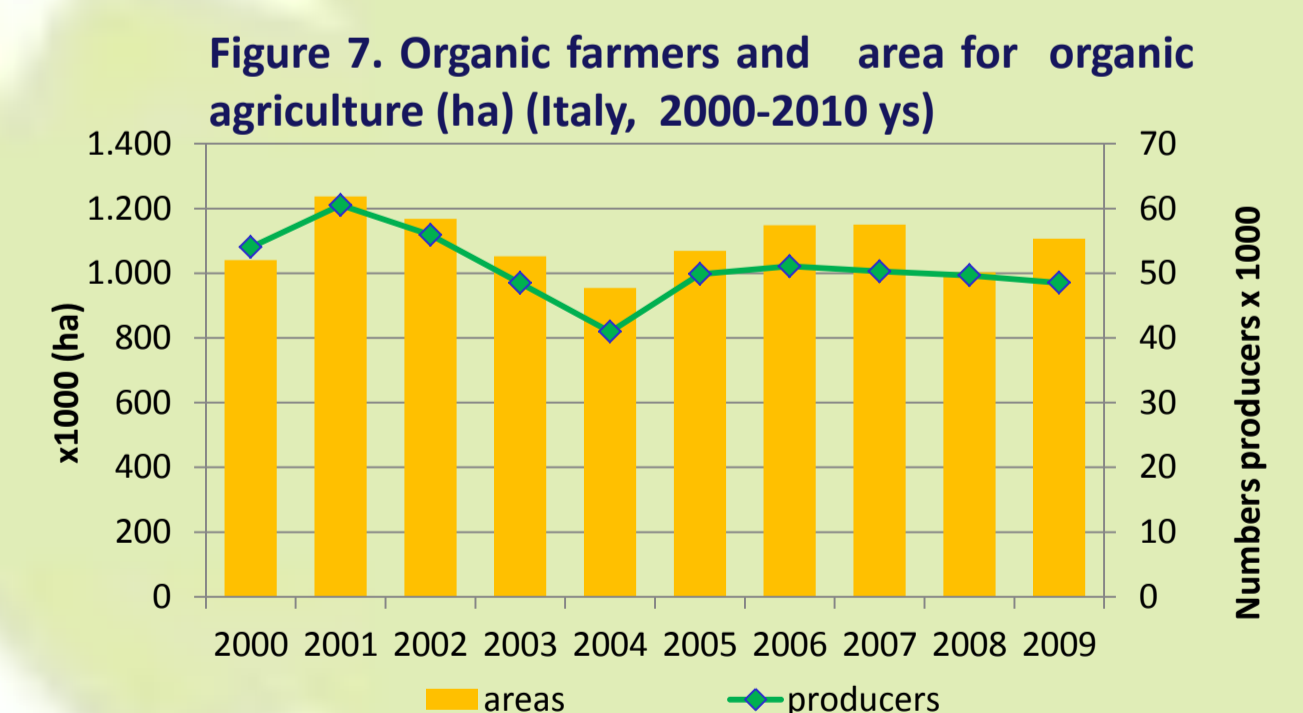
- intercropping: the growth and rotation of different kinds plants on the same land/area;
- the use of integrated and organic strategies against natural enemies (Figure 6);
- monitoring for pest management and diseases;
- the choice of plants and animals resistant to diseases and adapted to local environment conditions;
- animal breeding practices appropriate for different livestock species.



Figure 6. Mite pest and predatory mite

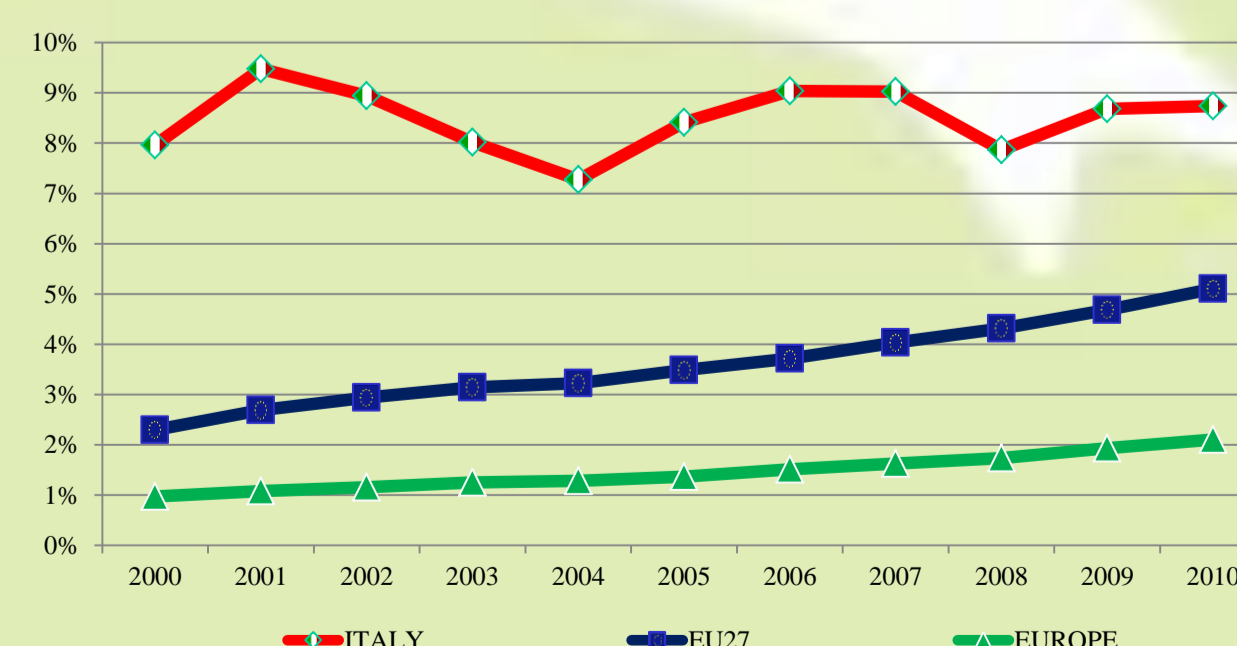
The area in conversion or converted to organic, amounted to 1,106,684 hectares and covered 8.5% of the area devoted to the Italian agricultural production.

Organic involved workers are 48,509. As the number of farms decreases, an increase in the average area/farm is registered (Figure 7).



From European organic farming statistics, 2012

Figure 8. Allocated area (%) to organic agriculture in Italy, Eu27 and Europe (2000-2010 ys)(from European organic farming statistics, 2012)



Italy maintains the lead in Europe both by the number of organic certified operators/farmers and by the ratio between the organic cultivated area and the conventional one (Figure 8).

