



guarantee  
of  
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food



[www.zerya.org](http://www.zerya.org)

## What is Zerya® ?



- Multidisciplinary crop management system
- Based on R+D+i
- Focus on technical management of the crop and rational use of inputs (crop protection, fertilizers)
- Technical committee per crop type (workgroups)
- Administration centre that registers certified farmers, accredited laboratories, suppliers of both agrochemicals and biological inputs
- Web based registry of farms and crops, traceability, on-line forum for customers & workgroup members, communication platform between Zerya® and certified farmers (disease prediction toolkit), communication platform with the market (full traceability output with lab report & crop log)

### Zerya® Think Tank

Key growers and researchers are involved in the Zerya® forums. Each crop is analysed by its relevant committee which contributes to the research and development (R+D) priorities for their industry. This research ends in a crop management toolkit with diagnostic keys which allow growers to go through a checklist answering questions about any problems they see in the crop and produces a shortlist of the possible causes. This diagnosis then requires a correct interpretation of the technical manager in the field. Continuous training by Zerya® must allow such technicians to make the right decisions and comply with the standard's objectives.

### What are Zerya's targets?

- Maximise shelf-life
- Minimise the risk of microbiological contamination
- Reduce residues
- More sustainable farming

### Building blocks of Zerya®

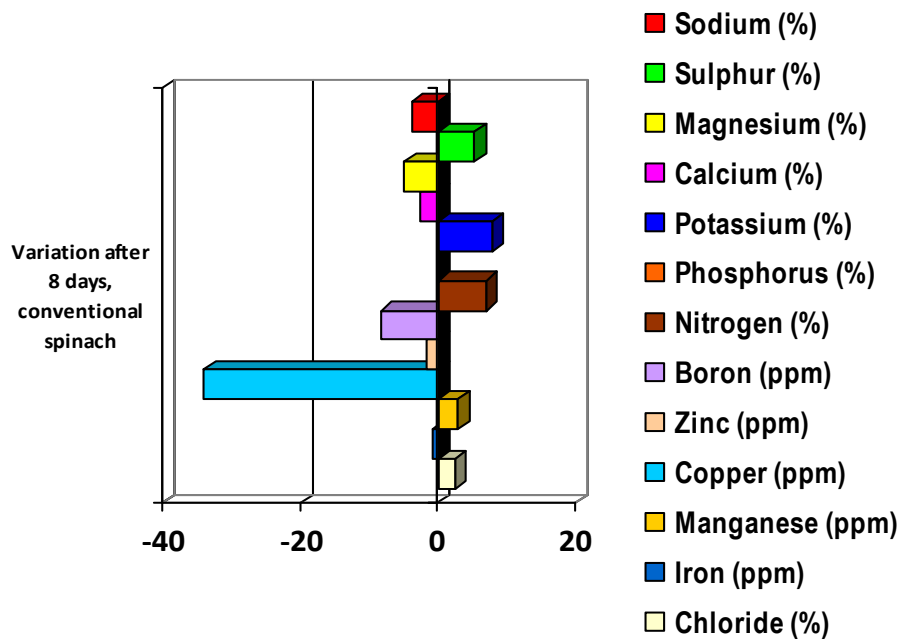
- Elaborating predictive systems
  - Disease predictive models
  - Pest tendencies
- Testing of chemical & biological crop protection agents on:
  - Exact composition
  - Efficiency & Appropriate dosage
  - Residue & Degradation curves
  - Impact on beneficial wildlife
- Research on rational use of fertilizers
- Initial and continuous training of technical staff of Zerya® farmers and future members
- Sampling scheme to control status of the crop performed by approved laboratories
- Transparency granted with third party audit performed by independent Certification Body



## Maximise shelf-life

### Case : Spinach

After application of a systematic variation method for optimizing the mineral nutrition, Zerya® system has been able to clearly improve the shelf-life of spinach. An optimal (lower) level of nitrogen decreases expansion of cell volume, increasing cell wall thickness, decreasing the sensibility to diseases and increases shelf life.



## Minimise the risk of micro-biological contamination

Comparing different ways of handling the organic wastes during composting, with temperature monitoring during the process, active composting has proven to be the best organic matter for 4 important reasons :

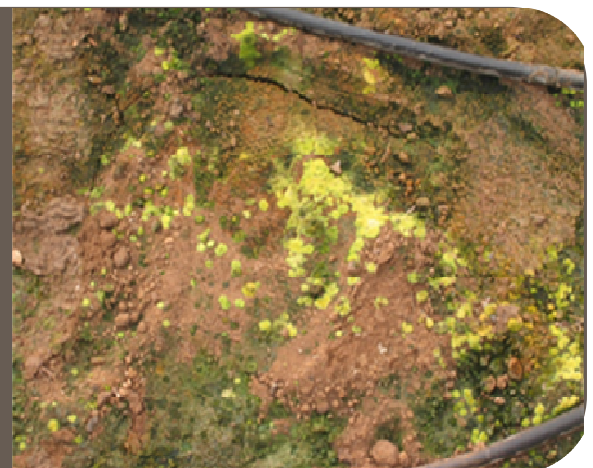
1. Traceability of organic matter
2. Low risk of contamination
3. Predictable nutrient composition
4. Energy efficient fertilizers

### Requirements established by RD 824/500 (Spanish Royal Decree) on the use of manures and organic wastes

*E. coli* < 1.000 cfu/g product  
*Salmonella spp.* Absent /25 g product

### NATUPOST

*E. coli* Absent  
*Salmonella spp.* Absent /25g product  
*Listeria spp.* Absent



*Actynomicetes*



## Reduce residues

In order to reduce the quantitative dependency of pesticides Zerya :

1. has been testing and selecting both agrochemicals and bio-pesticides on exact composition, efficiency, residue, appropriate dosage and impact on beneficial fauna, but most important of all, has screened their degradation curves.
2. is training, updating and coaching farmers on early warning systems and measuring thresholds (disease predictive models, pest trends)
3. governs a website to put information and tools for pest monitoring, decision-making and non-chemical measures available to the technicians of member-farmers and consultants.

Product free of detectable residues (<0.01 ppm) is a reality today among Zerya member-farmers.

## More sustainable farming

### Biodiversity

Beneficial wildlife is an important resource to protect by reducing the use of pesticides. Therefore Zerya® farmers are establishing a treatment free zone in each plot, in some cases up to 30% of the surface. This way nature's balance and beneficial wildlife like predatory insects benefit.

### Fertilizer and energy use

The use of active composting techniques reduces machinery movements up to 90%. Moreover nitrogen, phosphorus and potassium supply are reduced considerably.

### Crop protection

Decision making under Zerya® system reduces the total dose of pesticides per crop. Furthermore, as the farmer is allowed to use exclusively the chemical and biological products out of a limited list of approved products, Zerya® can measure benefits for soil, water and beneficial wildlife.

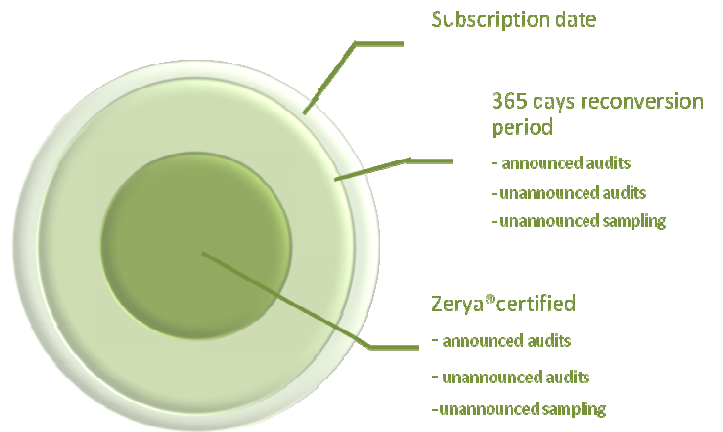


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**ZERYA® crops use less resources, have a lesser carbon footprint, protect and often increase biodiversity, therefore they are more sustainable.**

## Zerya® Quality Assurance

- The cooperation between each technical committee of Zerya® and farmers is an agricultural network focused on knowledge development and dissemination in practice.
- Every farmer has to meet general requirements (Global Gap, etc.) and specific requirements (Zerya® guidelines on training, crop protection, multi-residue testing, monitoring, fertilizing, etc.) to participate.
- Usually new members have to participate in a 12-month pre-certification period, before having the possibilities to get their crops Zerya® certified.
- Zerya® offers the option to farmers to suspend a crop certification (in real time on the website) when necessary.
- Residue reduction scheme directives and drawing unannounced samples allow a reliable control of the types of active ingredients in crop protection. All residue test results can be consulted on line per traceability code.
- Local laboratories near the production regions allow to keep up with the high frequency of sampling required by the Zerya® standard.



[www.zerya.org/trazabilidad.html](http://www.zerya.org/trazabilidad.html)

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Traceability

ZERYA®

CODE

Introduce traceability code

Traceability code  Search

ZERYA® = Residue Free Produce, environmentally sustainable.

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Traceability query returns an output that includes Producer's Name, Crop description, Identification of the plots, Plantation date, Harvest date(s), Amount(s) collected per batch, multi-residue lab report, microbiological lab report and crop log.



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