

# inspia

EUROPEAN INDEX  
FOR SUSTAINABLE  
PRODUCTIVE  
AGRICULTURE





## INSPIA offers farmers a simple method to know the sustainability on the farm

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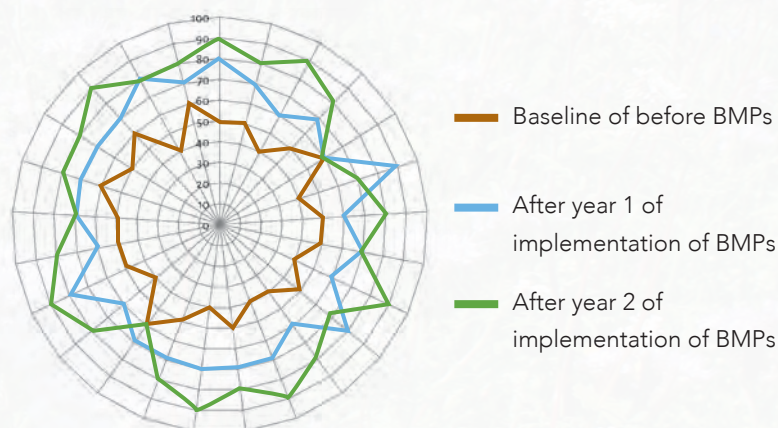


Taking into account economic, social and environmental factors, the INSPIA index can be used to assess sustainability in agriculture.

INSPIA aims to be practical and relatively easy-to-implement. Indicators have been selected to be both relevant and easy to monitor. Social and economic indicators make use of basic data such as 'time taken to implement' and 'cost required to implement', whilst environmental indicators such as those for biodiversity avoid complex and often unreliable data (such as species counting) and focus –for example– on monitoring habitat, forage and landscape structures. Soil quality and soil nutrient monitoring are included, as although technical, they are good practice and – in normal circumstances – economically feasible.

Based upon the entry of basic farm monitoring data, INSPIA provides farmers an easy-to-interpret graphical representation of the relative sustainability of their practices. This tool allows farmers to easily assess the status of sustainability and identify those areas that would benefit from improved delivery of best management practices.

INSPIA  
Sustainability  
graph.



Indicator scores are influenced by the implementation of BMPs. An optimal set of indicator scores is a set of uniformly high values. A high average score, but which includes very low values on some indicators, is suboptimal and not sustainable, even though there are steps in the right direction. INSPIA wants to revitalise how farmers think about sustainability. INSPIA believes farmers want to know more about how to integrate the use of technology with the use of ecosystem services, as the overall focus and direction needed for achieving sustainable productive agriculture.

Indicators are focused particular outcomes –or 'management targets'– in support of sustainable agricultural productivity; for example:

- Economic – Profitability and Production Efficiency
- Social – Farmer Welfare and Well-Being
- Environmental – Biodiversity Enhancement + Resource Use and Protection
  - Basic Soil & Crop management
  - Crop Inputs and Their application
  - Enhancing Biodiversity & Environmental Protection





## What is INSPIA?

Agriculture faces many challenges. It has to produce more food, feed and other raw materials to satisfy the increasing demands of a growing population. Agriculture must also contribute to economic prosperity and social well-being, while protecting natural resources such as soil, water and biodiversity.

The INSPIA project will demonstrate sustainable agriculture through the implementation of Best Management Practices (BMPs) and the measurement and monitoring of progress with a set of defined indicators.

INSPIA promotes sustainable management practices for agriculture that protect the ecosystem services provided by biodiversity, and contribute to safeguarding the soil and water resources on which sustainable agricultural productivity depends.

## INSPIA Objectives

- Demonstrate that BMPs help achieve sustainability in European agriculture.
- Provide an easy-to-read graph to guide the delivery of best management practices based on a set of verifiable indicators.
- Create a farm network to enable the validation, demonstration and communication of BMPs.
- Promote sustainable agricultural practices.
- Raise awareness among EU stakeholders.

## How to meet production demands and protect the environment at once?

There is strong empirical evidence that an increase in agricultural productivity can be achieved at the same time as environmental protection. Today, more and more production systems look towards what is often described as 'ecosystem based approaches' which aim to enhance both ecosystem functions and agricultural productivity.


## Why is biodiversity important for soil fertility?

Soil biodiversity is recognised as an indicator of soil health and quality; in fact, the organisms that live in and move through the soil are essential for the soil to fulfil its manifold ecological functions. Soil organisms contribute to soil fertility in their support of nutrient cycling, the movement of air and water, the biodegradation process, natural pest control, and the elimination of hazardous compounds. The importance of soil biodiversity dictates that sustainable agricultural practices include specific measures for in-field biodiversity.

## How does INSPIA support sustainable agriculture?

The INSPIA project encourages farmers on the way towards sustainability through the implementation of Best Management Practices (BMPs) and the monitoring of evolving with a set of sustainability indicators.

Importantly, INSPIA considers productivity a key element of sustainability in agriculture; this project aims to help build awareness that for agriculture to be sustainable, it must protect the environment but also produce sufficient, high quality food, feed and fibre.





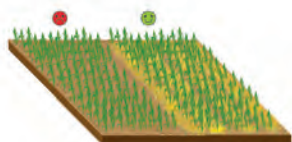
## How does INSPIA work with farmers?

INSPIA is currently operating on 56 farms located mostly in France and Spain, with a few in Belgium and Denmark.

In a nutshell, INSPIA seeks to offer farmers a user-friendly way to aim for sustainable productivity through the implementation of best management practices and the use of sustainability indicators to monitor performance and identify areas for improvement.

INSPIA accommodates the diverse requirements of European farmers by offering a range of optional BMPs (see below) and indicators enabling the tailoring of management practices to suit local conditions and crop types.

## BMPs to enhance biodiversity and protect resources



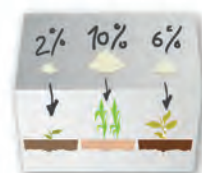
**BMP 1.** Use permanent soil cover (green cover or residue cover)



**BMP 5.** Perform farming operations following the contour lines



**BMP 2.** Use of minimum soil disturbance practices



**BMP 6.** Fertilize according to soil deficiencies and crop needs



**BMP 3.** Use of groundcovers (in perennials)



**BMP 7.** Plant Protection Product (PPP, i.e. pesticide) use according to Integrated Pest Management Strategy (IPM)



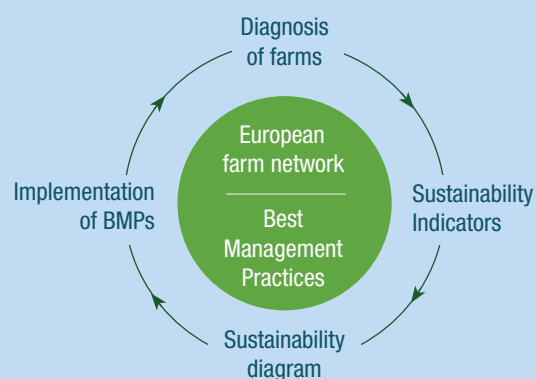
**BMP 4.** Perform suitable crop rotation/diversification



**BMP 8.** Use of modern technologies for applications (Precision Agriculture)

Specific best management practices are implemented on the farm, following an appraisal to determine the most appropriate management practices. Indicators which enable an assessment of the impact of specific BMPs are monitored, providing means to evaluate the sustainable performance of the farm, and allowing performance levels to be observed over time. Crucially, the sustainability graph provides a means to help farmers identify those management practices that meet sustainability objectives and those that are lacking, or could be improved.

## INSPIA working cycle



**BMP 9.** Optimise irrigation timing and rate (considering soil water content, water holding capacity in the soil, and crop requirements in relation to evapo-transpiration)



**BMP 13.** Build retention structures across slopes to reduce length of plots (fascines, vegetative buffers)



**BMP 10.** Optimised use of pesticides (correct dose and appropriate product)



**BMP 14.** Point source prevention of PPP (pesticide) pollution on the farm (establish areas to fill and clean sprayers and manage containers)



**BMP 11.** Implementation of field margins and buffer strips with diversity of plant species



**BMP 15.** Perform optimised waste management (packaging, crop residues, effluents, pesticide containers, etc.)



**BMP 12.** Establish and maintain riparian buffers



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**CONTACT**

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