



Market Opportunities for Biostimulants and Biofertilizers

Presented by:

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**AEFA - Spanish Association of
Bioestimulant Manufacturers**

13 October 2026

**From Innovation to Market: Regulatory Pathways for
Biofertilizers and Biostimulants in Europe**

Quick Agenda

1. AEFA Introduction

2. Bioestimulant Definition

3. Market Opportunitites for Bioestimulants

4. Very Brief Introduction to Spanish Regulatory Framework



AEFA

Spanish Association of Agronutrient Manufacturers

AEFA primarily represents the sector of manufacturers of fertilizers, specialized plant nutrition products, biostimulants, microorganisms and biocontrol products.

It works to contribute to the development and expansion of the biostimulation sector.

Headquarters in Valencia, Spain — founded in 1997

+ 60 members with over +3,500 employees

+75 factories across the country

Association figures

AEFA's members cover the full range of agronutrition products, from EC and national fertilisers to biostimulants, biofertilisers and microorganisms.

+€1,000 million

Total turnover in 2025

Volume of biostimulants and
specialty nutrients

5.6%

Growth compared with 2024

Volume of biostimulants and
special nutrients

85%

Share of the total market

3.8%

Investment in R&D&I

Of turnover allocated to
innovation projects



AEFA Internationalisation

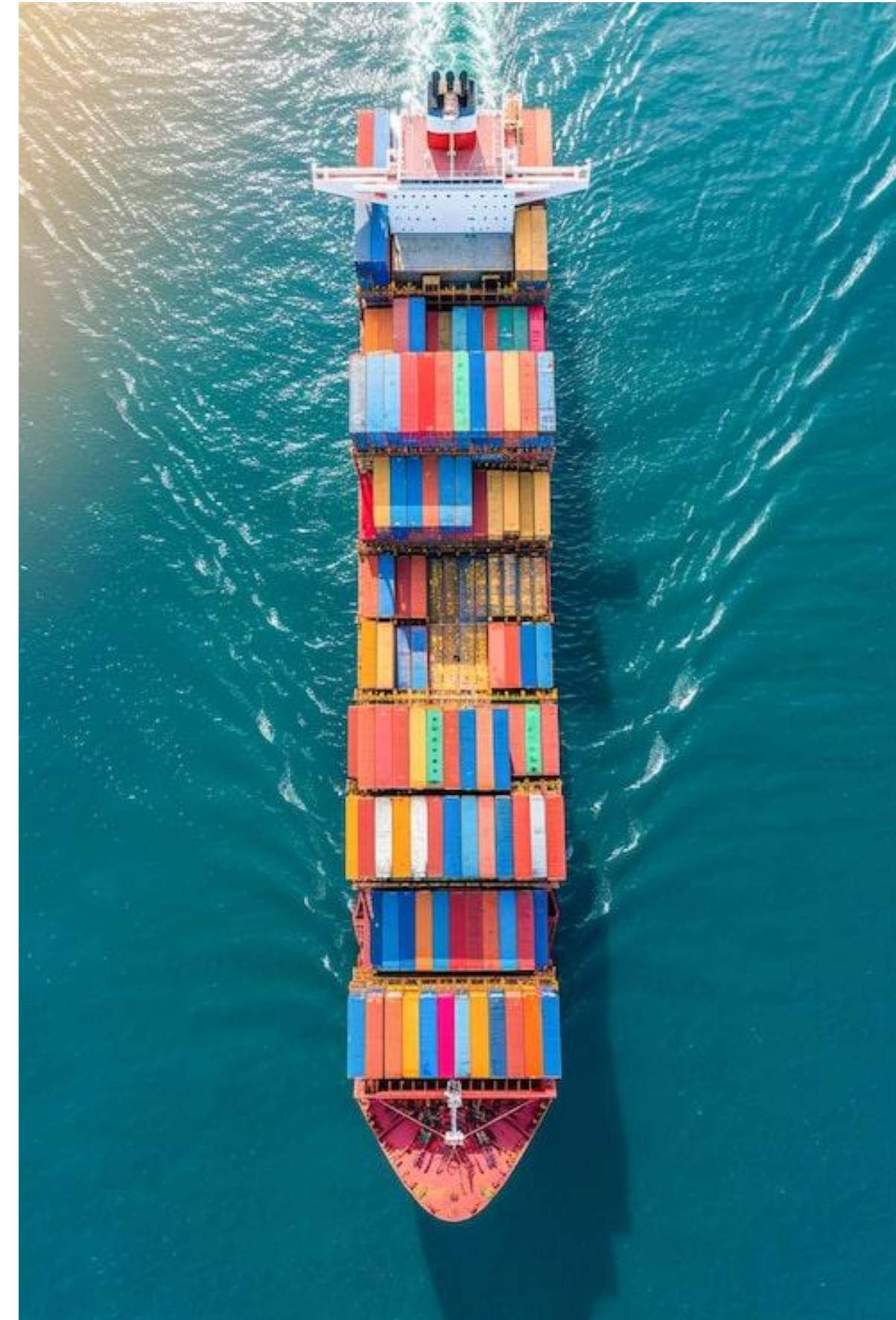
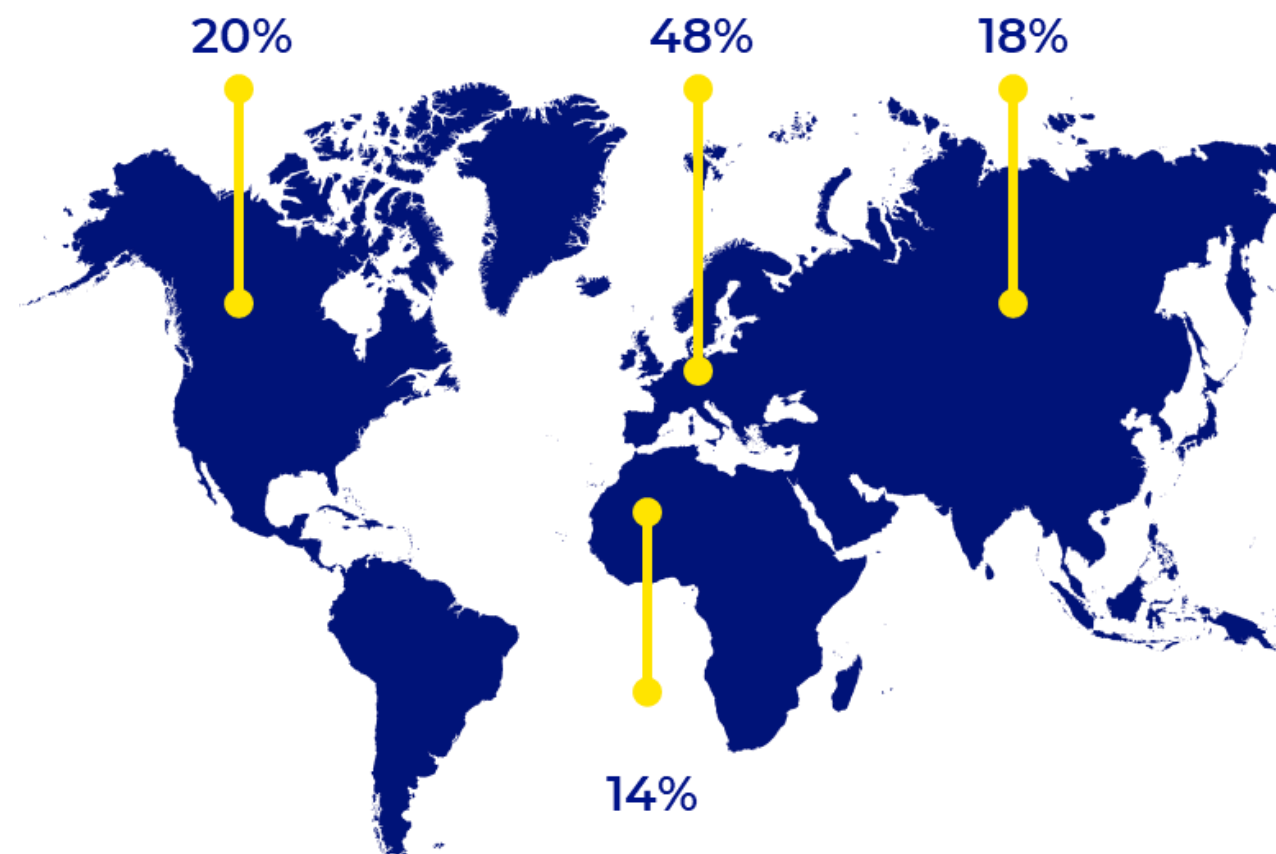
AEFA member companies sell to over 100 countries across the globe.
They operate on 4 continents.

60%

Domestic sales

40%

Sales International







DEFINITION REGULATION 2019/1009 - FPR

A product that stimulates the natural processes of plants regardless of nutrient content, with the sole aim of improving one or more of the characteristics of plants and their rhizosphere:

- (a) nutrient use efficiency,
- (b) tolerance to abiotic stress,
- (c) quality characteristics, or
- (d) availability of nutrients immobilized in the soil and rhizosphere.

DIFFERENT TECHNOLOGIES

- Humic and fulvic acids
- Hydrolyzed proteins and amino acids
- Algae and plant extracts
- Chitosan and other biopolymers
- Inorganic compounds
- Microorganisms

Visible Effects of Biostimulation

Fruits

- Improved fruit set
- Increased fruit size and weight
- Enhanced quality
- Higher yield

Seedlings

- Early growth stimulation
- Stronger seedling establishment

Roots

- Enhanced absorptive roots
- Improved primary root development
- Better rooting of cuttings

Plant

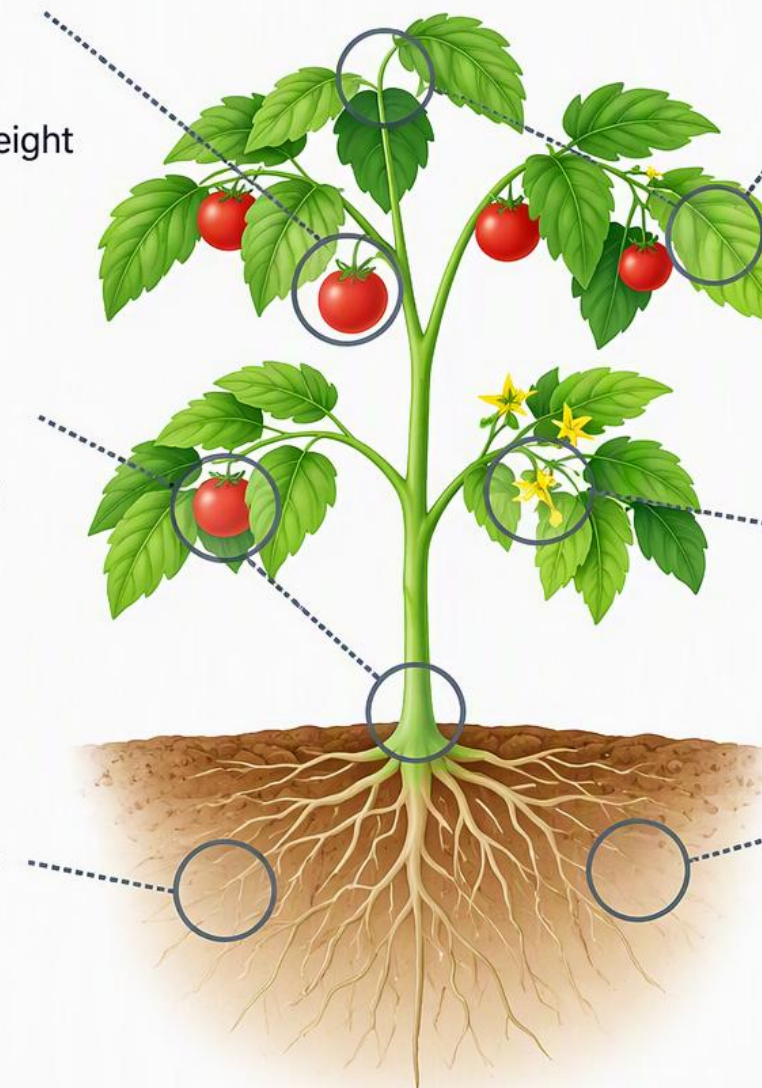
- Growth and development
- Improved water and nutrient uptake
- Enhanced tolerance to abiotic stress

Flowers

- Induction of flowering and flower bud formation

Soil

- Improved physicochemical properties
- Increased water and nutrient retention
- Reduced effects of salinity and water stress



(Povero, Mejia, Di Tommaso, Piaggese, & Warrior, 2016).

5 AREAS WITH A STRONG MARKET POTENTIAL



| Market opportunity starts with a real farmers need

NUTRIENT USE EFFICIENCY

ABIOTIC STRESS
MANAGEMENT

MICROBIAL
SOLUTIONS

COMBINATION
TECHNOLOGIES

HIGH – VALUE
CROPS



5-10% increase
in nutrient use
efficiency



5%-15%
increase in yield
from harvest
production



15% improvement in
quality features:
Fruit set
Color homogenization
Size increase
Flavour Enhancement
Reinforcement technical characteristics

| Getting more value from every nutrient

The goal is not to apply less, but to ensure that every kilogram applied translates into biomass and harvestable yield.



Rhizosphere dynamics & root architecture

Stimulating root elongation, lateral branching, and root hair density to access locked nutrients.

Uptake and internal mobilization

Facilitating vascular transport and enzymatic assimilation, cutting losses to leaching and fixation.

| Climate stress in already a real production challenge

Southern Europe, Mediterranean area in particular, no longer views climatic stress as an occasional anomaly. Heatwaves, salinity, and water deficits define each season.



Production risks and challenges

Flower abortion, poor fruit sizing, and photosynthetic shutdown during heat spikes.

Stress Management is becoming a new productivity strategy

Farmers are looking for :

- ✓ Better Water Use Efficiency
- ✓ Improved nutrient uptake under stress
- ✓ Better root development
- ✓ More stable yields
- ✓ Improved crop quality
- ✓ Greater resilience during critical growth stages

| From scientific research to market opportunity

Future winners microbial bioestimulantes will not be necessarily those with the most promising microorganisms, but those to deliver reliable and economically viable solutions to farmers



Fertilizer Efficiency

- Nitrogen fixation microorganism
- Phosphorus-Solubilizing Microorganisms
- Potassium-Mobilizing Microorganisms
- Plant Growth Promoting Microorganism
- Micronutrient Mobilisation Microorganism

Soil Health is becoming a strategic asse

- Soil Biology
- Rhizosphere interactions
- Long term soil productivity

| The future is product integration

The market is moving beyond single-product solutions. Farmers are demanding more and more integrated solutions that address multiple agronomic challenges simultaneously



Microorganisms	Nutrient mobilization and soil biology.
Seaweed extracts	Abiotic stress tolerance
Aminoacids	Recovery from stresses and metabolic support.
Humic Substances	Root development and nutrient availability.
Speciality fertilizers	Crop nutrition.

Examples of Integrated Solutions

Nutrient Use Efficiency: Microbial biostimulants + speciality fertilizers

Drought and Heat Stress: Seaweed extracts + amino acids + microorganisms

Soil Health : Microorganisms + organic amendments + humic substance

| Where innovation often reaches market first

High-value crops are often early adopters of biostimulants and biofertilizers because even small improvements can generate significant economic returns



What are growers looking for?

YIELD: Improved fruit set + Better crop uniformity + Increased marketable production

QUALITY: Size + Color + Firmness + Sugar content + Shelf life + Vitamin content

ABIOTIC STRESS MANAGEMENTY: Drought Tolerance + Heat Stress + Recovery Adverse Conditions

RECOVERY EFFICIENCY: Better Use Water + Improved Nutrient Uptake + Efficient Fertilizer Programs

Why is this a market opportunity?

In high-value crops:

- ✓ The economic value per hectare is higher
- ✓ Quality parameters directly influence profitability
- ✓ Growers are willing to invest in innovative solutions
- ✓ Technical support and monitoring are more common
- ✓ New technologies can be tested and validated more quickly

Five keys to turn innovation into market

- 01 Start with a real farmer need
- 02 Demonstrate repeatable performance
- 03 Integrate regulatory strategy early
- 04 Design for industrial scale and stability
- 05 Ensure clear economic return for the grower



Why is it essential to understand regulation?

A fertiliser & biostimulant product can only be placed on the market if it complies with current legislation.

Understanding the regulatory framework is an essential prerequisite for the successful development of any innovative product.

Legal certainty

It ensures that the product can be marketed without legal risks in Spain and in the EU

Product strategy

Defines the regulatory framework and the requirements for the technical dossier from the outset

Market access

Identifies the available registration routes and realistic launch timelines.

Also, on certain occasion, covers its function, application, crops and dosage





Go to Market Legislative Framework for Fertilizers in Spain – 3 Routes

⊗ Until 2022, there were 27 different sets of regulations in the EU governing the marketing of fertilizers & biostimulants, resulting in high costs for businesses and supply difficulties in markets with lower potential.

Current Regulatory Pathways since 16 July 2022

EUROPEAN ROUTE

1

European Regulation - FPR

Regulation (EU) 2019/1009 — in force since July 2022. Harmonized framework for fertilizers & plant biostimulants products.

NATIONAL ROUTE

2

National Regulations from each member state – National Fertilizing Products – National Scope

Spain - Royal Decree 506/2013
Amended by Royal Decree 999/2017 to include microorganism-based fertilizers.

3

Mutual Recognition

Regulation (EU) 2019/515 — applied on a country-by-country basis for non-harmonized products.



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