



# INTEGRATED FERTILISATION PROGRAMME (IFP) PESTNU PROJECT

### What is an integrated fertilisation programme?

Fertinagro's Integrated Fertilisation Programme (IFP) is a fertilisation plan that includes the advice of a technician specialised in the crop and the use of technological, ecological and biosustainable fertilisers and biostimulants that make better use of the nutrients provided, as well as greater mobilisation of the nutrients that can be found blocked in our soils. Thanks to biostimulation and the use of specific technologies with prebiotics (nutrients for soil microorganisms) and probiotics (microorganisms incorporated in the products), a balance is achieved in the soil ecosystem, boosting endogenous microorganisms of agronomic interest and mitigating the effect of other pathogenic microorganisms or those that produce destruction and denitrification of organic matter.

The contribution of technological and quality organic matter that is made during the development of the PFI achieves an effective regeneration of the soil at a physical, chemical, biological and functional level, as well as a notable increase in the levels of organic matter in the soil. On the other hand, the increase in the microbiological mass generated by the IFP in the soil contributes to the fixation of nitrogen and atmospheric carbon.

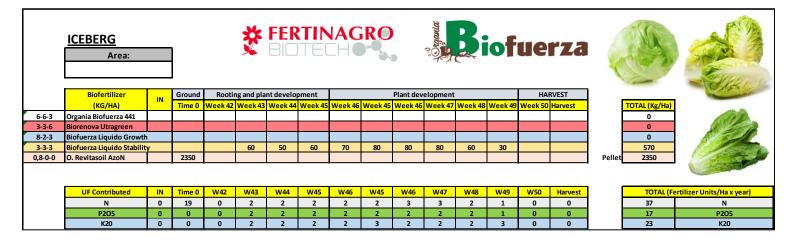
## The advantages of a IFP over a traditional fertilisation plan:

- Constant and continuous increase in soil organic matter.
- Reduction of between 30 and 60% of the fertiliser units supplied to the crop due to the
  increase in nutrient utilisation performance, biological fixation of atmospheric nitrogen
  and biosolubilisation of phosphorous and potassium among other nutrients.
- Increased soil and phyllosphere biodiversity.
- Reduced water footprint: improvements in water use have been observed due to improved soil structure and changes in soil water holding capacity.
- <u>Elicitor effect</u>: Indirectly, a reduction in pests and diseases affecting the crop has also been observed. This is due to the increase in microorganisms that generate a protective action on the crop and to the increase in the crop's own capacity to generate defence substances against biotic, climatic or water agents that may affect it.
- Lower accumulation of nitrates in leaves and fruit because biostimulation causes them to be metabolised by the crop and transformed into production or biomass.
- The IFP is an optimal tool for implementation in vulnerable, degraded areas or areas with restrictions of any kind and can be adapted and customised to any type of situation.

### Example of a IFP carried out in the PestNu project for field fertilisation.

This particular fertilisation programme was carried out in three phases that were adapted to the regulations of the area (Ley del Mar Menor, Spain) and to the objective of the project.:

- Phase I. Soil regeneration: a soil regenerator, Organia Revitasoil Azon, based on hydrolysed protein with high energy value and highly humified organic matter that is easily digestible by soil microorganisms, was used. This regenerator contains prebiotics and probiotics to fix atmospheric nitrogen, solubilise phosphorus and potassium among other nutrients and reinforce the protective effect against nematodes (nematostatic) and fungi (fungistatic).
- <u>Phase II</u>. Integral nutrition of the rhizosphere: Biofuerza Liquid Stability is provided as a nutritive solution but also with the aim of continuing to improve the soil at an integral level, as well as the ecosystem associated with it and to continue to mobilise nutrients and make them available to the crop.
- Phase III. Metabolic enhancement of the crop: this includes the rest of the products used in the IPP, each with its own function. The aim is to increase the crop's capacity to transform nutrients into production or biomass more quickly and efficiently, to achieve a greater volume of root exploration in the soil or even to fortify the crop so that it defends itself better against pests, diseases, climatic factors and stresses of any kind.



# **NUTRITIONAL PROGRAM FERTINAGRO**

| PRODUCT                | IN | Ground | Rooting and plant development |      |     |     | Plant development |     |     |      |     |     | HARVEST |          |
|------------------------|----|--------|-------------------------------|------|-----|-----|-------------------|-----|-----|------|-----|-----|---------|----------|
| (Kg/Ha)                |    | Time 0 | W42                           | W43  | W44 | W45 | W46               | W45 | W46 | W47  | W48 | W49 | W50     | RECOLEC. |
| Efisoil Renovation     |    |        |                               | 5    |     |     |                   | 2,5 |     |      |     |     |         |          |
| Aminovit Vigorion Azon |    |        |                               |      |     | 2   |                   |     |     |      | 2   |     |         |          |
| Efisoil Aminoshoot ECO |    |        |                               | 12,5 |     |     |                   |     |     | 12,5 |     |     |         |          |
| Bioqel Ferrum          |    |        |                               |      |     |     |                   |     |     |      |     |     |         |          |
| Microquel Amin Copper  |    |        | 5                             |      |     |     |                   |     |     |      |     |     |         |          |
| Efisoil Superbia AzoN  |    |        |                               |      | 2   |     |                   |     | 2   |      |     |     |         |          |
| Superblackpot          |    |        |                               |      |     |     |                   |     |     |      |     | 4   |         |          |