SOBAC

For the soil, for a long time.

SOBAC SOLUTIONS

MARCEL MÉZY TECHNOLOGIES

For the health of the earth.

PROFITABILITY - SOIL FERTILITY - VALORISATION OF EFFLUENTS - METHANIZATION

**UNIQUE TECHNOLOGIES
TO PRODUCE HUMUS
ESSENTIAL TO THE HEALTH OF YOUR SOIL
AND QUALITY OF YOUR PRODUCTION...**

** Product usable in organic farming in accordance with regulations (CE) n° 834/2007 and n° 889/2008 on organic farming*

ORGANIC
SUITABLE
FOR ORGANIC
FARMING*

SOBAC SOLUTIONS

MARCEL MÉZY TECHNOLOGIES

FERTILITY, QUALITY, SELF-SUFFICIENCY, PROFITABILITY, SUSTAINABILITY, ENVIRONMENT

The Marcel Mézy Technologies distributed by SOBAC across France and Europe, are solutions to worldwide issues such as **food safety, improving water resource management, combating global warming** by capturing carbon in soil to ensure **vigorous, healthy, sustainable, consistent, natural and self-sufficient production** for the **betterment of farmers, citizens and consumers.**

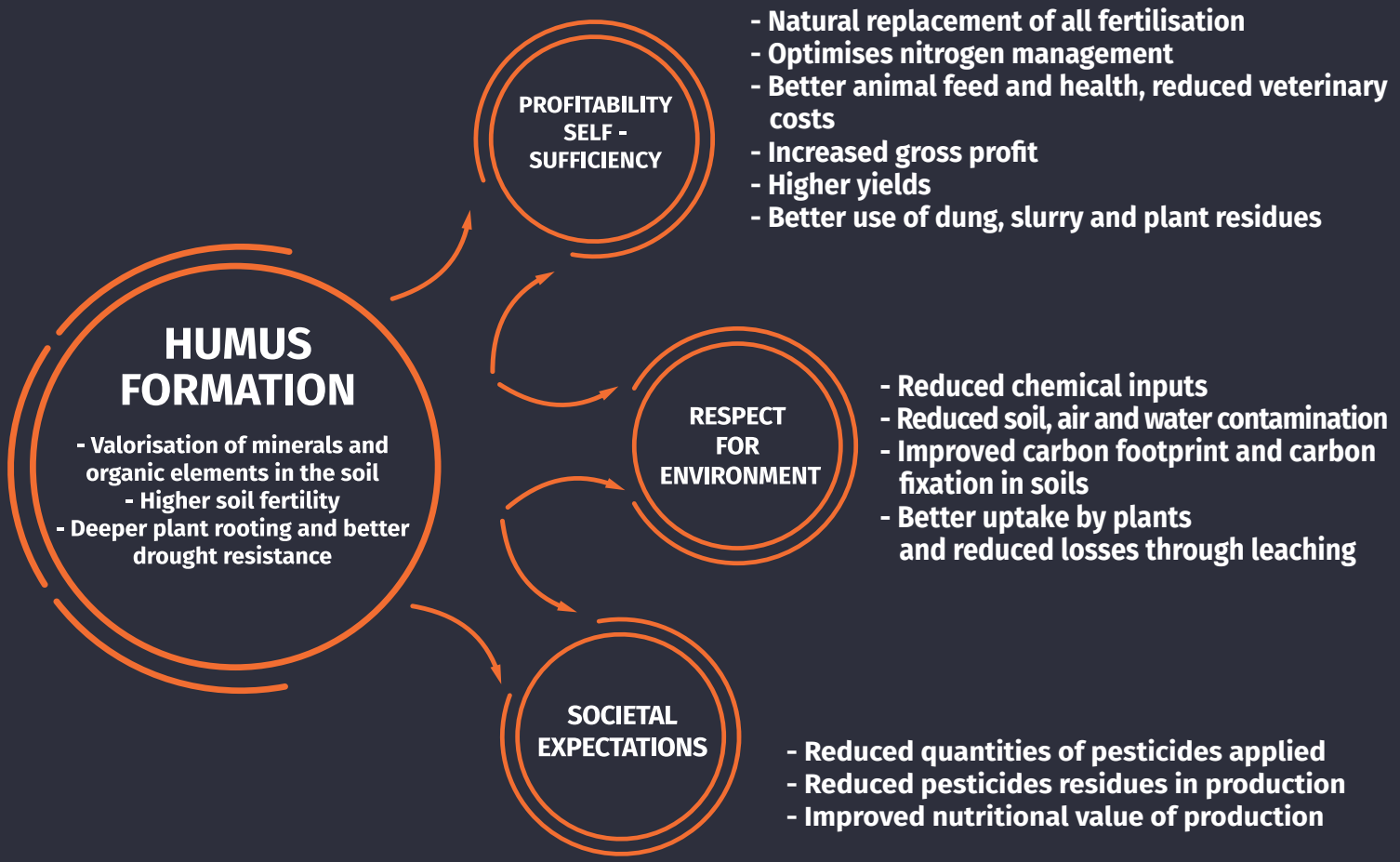
Three decades of partnership, experience and demonstrations have proven that our natural production systems are **effective in improving soil fertility** and are the **agro-economic solutions** of our century.

In focusing on **soil health**, SOBAC stands out as a **major player in the food chain, a pioneer in social, agronomic and economic solutions** that are **beneficial to all**. Its solutions help **boost both plant and animal production and their value.**

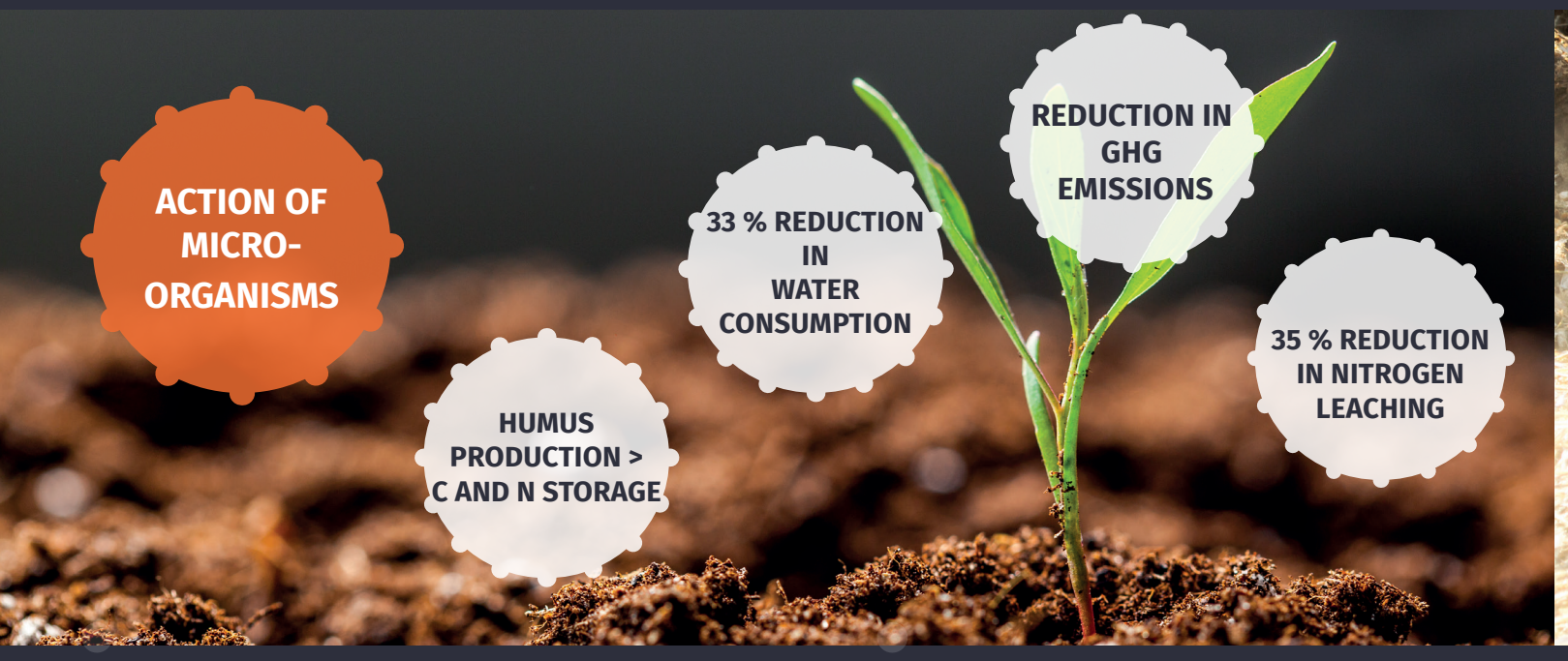
The fruits of a solid partnership forged with farmers, and the results of economic studies, demonstrate that SOBAC solutions **develop farms' self-sufficiency, gross profits, and sustainability.**

Marcel Mézy technologies are developed by MÉZAGRI and marketed by SOBAC.
Since 1999, SOBAC is listed by ADEME in its "Product Design and Environment Guide : 90 examples of eco-design", where it features as the only product for agriculture.

EFFECTIVE SOLUTIONS, CONCLUSIVE RESULTS FOR MANY DECADES, IN ALL AGRICULTURAL SECTORS



SOIL FERTILITY



BACTÉRIOSOL®

BACTÉRIOSOL CONCENTRÉ - BACTÉRIOSOL® CONCENTRÉ UAB

For fast humus production in all types of soil, boosting fertility, by reducing inputs and fixing carbon and nitrogen.

BACTÉRIOSOL is an **organic amendment** that improves the physical, chemical and biological properties of soils **by quickly creating humus in all types of soils.**

By fixing the elements in the resulting clay-humus complex, it **reduces losses through gas emanation** (notably carbon and nitrogen) and **losses through leaching** while making more of the elements in soil, air and organic matter available to plants. This boosts **the natural fertility of the soil** and its ability to provide the quantity and diversity of elements needed, thereby **reducing the amount of fertilizer as well as plant deficiencies and stress**. They can boost plant yields and quality by greatly reducing recourse to chemical inputs (fertilizers, phytoproducts).

This high-quality plant production can then be sold as a higher class of product, or consumed by livestock resulting in high-quality and therefore high-value animal products. Moreover, **these better-nourished animals will be healthier** and require less recourse to vets.

With BACTÉRIOSOL, expenses can be reduced, profit margins improved, and self-sufficiency increased. This is how we can improve **the overall profitability of a farm.**

Conclusive results in terms of production quality and contribution to farm self-sufficiency.

AGRONOMY

Humus creation improves soil structure and soil fertility, with numerous resulting benefits:

- Optimises fertilisation management
- Nutritional properties of production
- Increased resistance to drought and diseases
- Better rooting

PROFITABILITY - SELF-SUFFICIENCY

- Replaces all mineral and organic fertilisation
- Reduces use of phytosanitary products
- Improves yields and quality

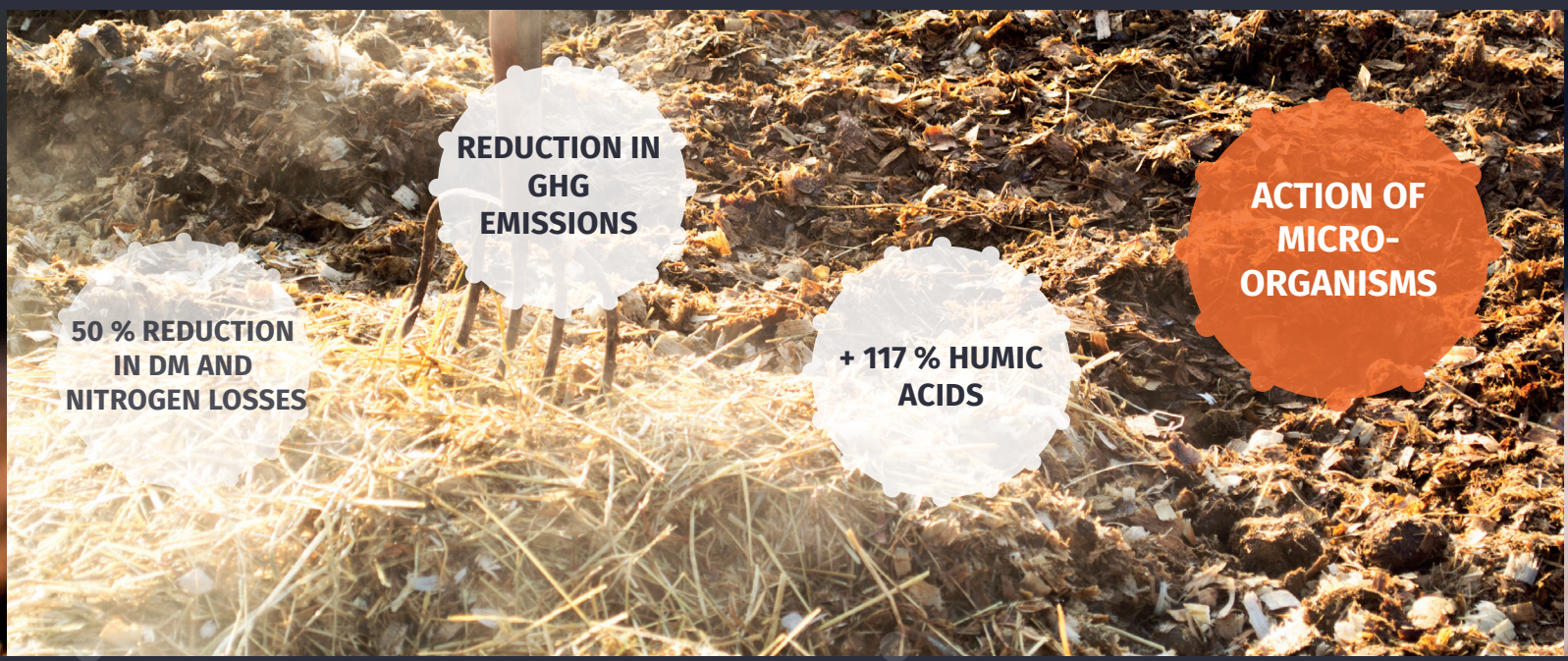
ECONOMICS - INCOME

- Improved margins per ha
- Improved margins per livestock unit

ENVIRONMENT

- An effective response to new agro-environmental standards
- Reduction of pollutant effects
- Reduced losses through leaching of soluble elements including nitrates
- Improved carbon and nitrogen balance

EFFLUENT ENHANCEMENT



BACTÉRIOLIT®

BACTÉRIOLIT® - BACTÉRIOLIT® CONCENTRÉ

To quickly transform manure and slurry into humus, enhancing their use by fixing their elements in the soil for better plant uptake as needed, to improve farming self-sufficiency and profitability.

BACTÉRIOLIT is a 100 % natural **composting additive** which rapidly **transforms into humus any type of organic matter** (manure, slurry, crop residues, green waste, digestates,...) and **improves their efficacy**, notably by reorganising the forms of nitrogen that they contain. The minerals contained in farm fertilisers are reorganised and **fixed on the clay-humus complex and fed back to plants rather than being evaporated or leached**. By fixing the elements of the organic matter in the humus of the soil, **BACTÉRIOLIT** technology **makes better use of them by reducing losses to air** and through **leaching** by **giving them to plants as and when they want it**. Plants thereby take up nutrients in a more balanced way, suffer **less nutritive and water stress** and ultimately **produce abundant high-quality plants while reducing recourse to chemical inputs** (fertilizers, phytoproducts).

This high-quality plant production can then be sold as a higher class of product, or consumed by livestock resulting in high-quality and therefore high-value animal products. Moreover, these better-nourished animals will be healthier and require less recourse to vets. **With BACTÉRIOLIT, expenses can be reduced, profit margins improved, and self-sufficiency increased**. This is how we can improve **the overall profitability of a farm.**

In 2013, « FRANCE AGRICOLE » and « L'ÉLEVEUR LAITIER » awarded BACTÉRIOLIT the « INEL D'OR » Gold Prize for its performance in promoting sustainable agriculture, having been recognized by the Administration as CMO (Complex of Micro-Organisms) for in-farm composting without having to turn mechanically poultry dung to obtain organic amendments complying with NF U44-051 where production does not exceed 3t/day. A standard-compliant product can then be marketed and not just spread on fields.

Performance evidenced by the results of experiments conducted in partnership with official bodies and breeders.

AGRONOMY

- Enhances manure, slurry and digestates
- Creates humic acids
- Facilitates spreading of manure
- Prevents formation of crust and deposits in slurry pits
- Better plant uptake and stress resistance
- Optimises management of nitrogen and other minerals
- Improves soil structure
- Palatability of grass guaranteed
- Reorganises the nitrogen contained in livestock effluent in organic form
- Better C/N and N/P ratio

PROFITABILITY - SELF-SUFFICIENCY

- Improves overall profitability of farms
- Replaces fertiliser and amendment inputs
- Contributes to animal health and substantially, reduces veterinary and phytoproduct expenses
- Increases self-sufficiency of milk and meat production

ENVIRONMENT

- Less loss through leaching and evaporation
- Improves salubrity in livestock buildings: less ammonia and smells released
- Less gaseous emissions during storage and after spreading on fields

LOCALISED FERTILIZATION

BACTÉRIOSOL® BOOSTER

BACTÉRIOSOL® BOOSTER 10 AND 50

Localised action as close as possible to the seed for optimal harvest quality.

BACTÉRIOSOL BOOSTER improves the physical, chemical and biological properties of the rhizosphere, to promote:

- soil-plant exchanges

- root development

- micro-organisms, particularly mycorrhizal fungi

- rhizospheric soil humus as close as possible to the seed

Plants can better **express their potential, in terms of both yield and quality**. They **withstand external aggressions better** and are better able to use the water in the soil while using less inputs

The action of **BACTÉRIOSOL BOOSTER** is **localised to the rhizosphere**, while **BACTÉRIOLIT** or **BACTÉRIOSOL**, applied on the surface of the soil, act over the entire soil.

AGRONOMY

- Develops mycorrhizal exchanges
- Develops rooting
- Greater resistance to external aggressions / diseases
- Crop homogeneity

PROFITABILITY - SELF-SUFFICIENCY

- Optimises quality and yield
- Replaces starter fertiliser
- Participates in increasing gross profit margin

ENVIRONMENT

- Saves on inputs
- Saves water

QUATERNA® PLANT

CROP SUBSTRATE

A tool to boost the success of your plantings and companion plantings (vines, trees, bushes, and market garden plants).

QUATERNA PLANT is a **culture substrate** that can be used as a growth medium for certain plants.

Its action results in the formation of an environment enriched in air and water porosity which **promotes root development and contact with the nutritive solutions in the rhizosphere.**

It boosts soil-plant/tree exchanges, root development, water and mineral absorption, and stress resistance.

QUATERNA PLANT allows **better water uptake by plants** in new plantings as well as in companion plantings. Plant development is optimised thanks to better access to minerals and water.

AGRONOMY

- Develops mycorrhizal exchanges
- Better plant recovery and longevity
- Root development
- Stress resistance

PROFITABILITY - SELF-SUFFICIENCY

- Sustainability of plantings
- Quicker growth of plants

ENVIRONMENT

- Saves on inputs
- Saves water

METHANISATION - SEEDS

BACTÉRIOMÉTHA®

BACTÉRIOMÉTHA® - BACTÉRIOMÉTHA®TL

To boost methane production, and improve the digestion process.

BACTÉRIOMÉTHA technology is an **additive for methanisation substrates** containing natural minerals and a selection of composted natural plants.

It acts on the different phases of the organic matter transformation process based on different modes of action to **boost energy production.**

BACTÉRIOMÉTHA in combination with substrates **increases the accessibility of organic matter during the first phases of methanisation.**

It also significantly **reduces the losses** of elements from manure and slurry when substrates are stored in a pit or on a slab. **It also reduces clumping and promotes the stability and balance of the digestion process.**

PROFITABILITY

- Increases energy production
  - Better transformation of organic matter thanks to an optimised preparation of fibres
  - Improved digestion process in the digester
  - Possible savings in raw materials
- Less energy used and less wear
  - Reduction of crusts
  - Improved intermixing
  - Fibrous substrates more easily manageable

ENVIRONMENT

- Reduces losses and smells before methanisation

SEEDS

IN ASSOCIATION WITH SOBAC SOLUTIONS

A solid partnership, to go yet further towards self-sufficiency.

From the outset, **SOBAC** has been working in **partnership** with farmers on **production methods that would reduce chemical inputs in favour of a cleaner, self-sufficient agriculture, protecting health, while supporting the economic imperatives** of farmers, and **consumer expectations** particularly the **nutritional quality** of agricultural products.

It is with this in mind that **SOBAC** proposes to combine with Marcel Mézy Technologies, a **range of grass mixes** for high-quantity growth of grasses and legumes to **produce quality forage that is more balanced, less costly in inputs, and suitable for different soils and climates.**

SOBAC SOLUTIONS

MARCEL MÉZY TECHNOLOGIES

30 YEARS OF EXPERTISE WITH EXPERIMENTATION RESULTS EVIDENCED BY NUMEROUS SCIENTIFIC AND INSTITUTIONAL PARTNERS

AGROPARISTECH, PR. MARCEL MAZOYER :

- + 14 % cattle farming revenue in Limousin - FR
- + € 63 to € 89/ha/year profit margin in cereal rotation in Alsace - FR

PARIS-GRIGNON :

- Comparative study of manure: 50% less loss of Dry Matter and 2 times less nitrogen leaching.

INRA (NATIONAL INSTITUTE OF AGRONOMIC RESEARCH) :

- Comparative study of beef cattle breeder and multicrop farmer in Nièvre - FR : + 42 % profit, - 48 % expenses, - 64 % concentrate, + 22 % kg meat/Livestock unit (LSU) in self-sufficiency
- Loss of dry matter from manure halved

ITAVI (TECHNICAL INSTITUTE OF AVICULTURE) :

- 82 % reduction in nitrogen loss through gas emanation
- 39 % increase in organic nitrogen in manure

BIP (NATIONAL PRUNE INDUSTRY ASSOCIATION) :

- + €1,150 /ha/yr gross profit, quality and higher green-dry yield

PURPAN INP TOULOUSE :

- + 14.8 % fixed carbon and + 9.4 % fixed nitrogen in soils compared to control

LARA EUROPE ANALYSES :

- + 117 % humic acids
- Reduction by 1/3 of mineral nitrogen leaching and water pollution

AGRA-OST GOE (EAST BELGIUM AGRONOMIC EXPERIMENTATION AND RESEARCH CENTRE) :

- Conservation of remains during winter
- Improved productivity and quality of grassland
- Nitrogen efficacy of farm fertilisers doubled

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