### Synthetos®

Geolife® technology

Natural solution to optimize the composting of garden and kitchen waste, for use on no more than 3m<sup>3</sup>







### **Bioma**®

# A Swiss company with more than 30 years of international presence.

BIOMA is a company active in the production and marketing of "Chemical free" and "GMO free" solutions for the food industry, oenology, agriculture, environmental bioremediation, zootechnics and animal and human well-being.

Our products optimize all biological processes through indigenous microbiology and make it possible to reach an optimal balance in the targeted biomass. We seek to minimize the environmental impact within each structure.

The purpose of BIOMA solutions is to optimize production while guaranteeing economic sustainability.



**GMO-free** 



Chemical-free



Risk-free

# Geolife® technology An innovative manufacturing and patented process.

Geolife® is a technology for the extraction and stabilization of organic compounds allowing the activation of our products. This technology makes our products unique, easy to use and safe for the user, animals and the environment.

### Synthetos® Bio-enzymatic complex specifically designed for composting

Synthetos® can accelerate the transformation of vegetable waste into quality compost and helps microbial bioremediation.

#### **OBJECTIVES**

#### Making nutrients available

 Optimization of composting processes

· Odorless and leachate-free composting Stimulation of aerobic and

#### Into the compost



**Activating** proper

microbiology

- anaerobic microbial processes, which increases the waste decomposition rate within a shorter span
- Rapid mineralisation. humification and complete maturation of compost within 4-6 month

**Foster soil** structuration

- · Acceleration of the degradation of lignin and cellulose in the treated material
- · Improvement of the quantity of nutrients immediately available



### Our results: Vine shoots

#### Synthetos® for vegetable waste Campania, Italy - 2003

Immediate and long-term effects.

- Immediate effects: 72 hours after application of Synthetos®, biodegradation of organic materials, pH balance, and elimination of odor nuisance from the composting process could be observed.
- Long term effects: significant reduction of the time required in order to obtain a compost whose chemical and physical properties comply with limit values set by the law and the current technical regulations (30 days, instead of 90); furthermore, reduction of processed substrate volumes.

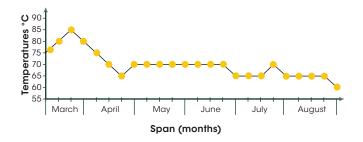
Odor emissions (concentrations are measured in mg/Nmc, with Cyranose 320 portable handheld electronic nose)

Compounds	0 h	24 h	72 h
Ammonia	46.4	17.4	4.1
Volatile Organic Acids	38.4	16.3	5.2
Sulphur compounds	32.6	16.3	4.6
Aromatic compounds	40.5	24.6	9.4

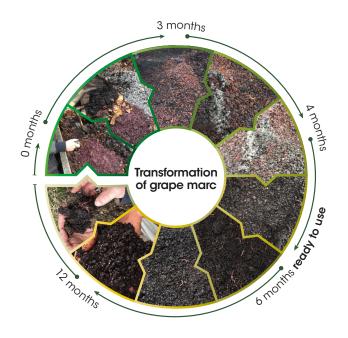
## Synthetos® for vegetable waste from vineyards and winery Lombardy, Italy - 2000

Report on compost from organic waste treated with Synthetos®.

Temperature graph, in the compost heap, with initial temperatures allowing microbial remediation.



## Examples: Transformation of grape marc



### **Processing of pruning residues**



