

# We produce the futures fertilizer

**FOR A BETTER WORLD**

with specific  
effective microorganisms





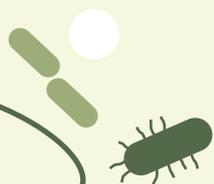
## Are you struggling with these problems?

- yield losses
- loss of quality and vitamins
- constantly rising costs for technology & artificial fertilizer (N-P-K)
- decreasing humus content
- no control over diseases & weeds

**In that case, your soil lacks organic life!**



**The solution**





# We provide the 2 pre- and probiotic components for regenerative agriculture



## 1. sEM PLANTFERMENT

We offer an **exclusive herbal blend** from an **intensive fermentation process** with **more than 85 naturally occurring aerobic and anaerobic microbial strains and soil fungi** (GMO-free).

With **plant based amino acids** and **extracts from earthworm humus, macro- and micro nutrients** (phosphorus, potassium, sodium, calcium, magnesium, copper, zinc, manganese and iron)



## 2. sEM COMPOSTTEA

We offer an **exclusive herbal blend** from an **intensive fermentation process** with **more than 40.000 naturally occurring microorganisms** (GMO-free), obtained from our **special developed earthworm humus. Enriched with charcoal and minerals, mycorizal fungi and EM ceramic powder.**

*Join us in transitioning to regenerative  
and sustainable agriculture!*

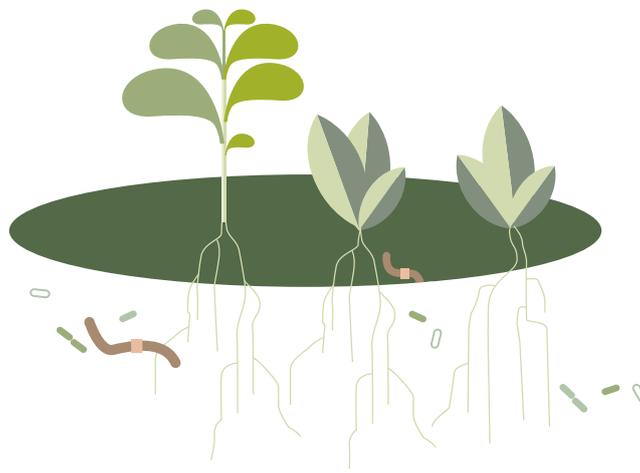


sEM plantferment



sEM composttea



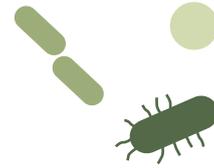


## YOUR BENEFITS:

- **healthy crops**
- **low costs**
- **less weeds**
- **humus growth** and CO<sub>2</sub>-storage
- **healthy soil** for upcoming generations
- effective **plant protection**
- **less effort**
- **water retaining capacity** in soils will **increase**
- approved for **organic agriculture and horticulture**



## WE ARE HERE FOR YOU WITH:



- **20 years of fermentation experience**
- **experts for agriculture and microbiology**
- **worldwide experience and individual on-site consultation**
- **unique concept development** to match your needs
- **second production site in Tanzania** for farmers in Africa
- **certified organic and GMO-free** products
- **soil fungus, aerobic und anaerobic bacterial strains**
- **photosynthetic bacteria**
- **unique** herbal mixtures
- **transparent production processes**
- **plant protection on an organic basis**



## WE ARE THERE FOR YOU AS:

- **family owned business**
- union member „**EM Bakterienfreunde**“
- union member „**Vereins zur Erhaltung der Nutzpflanzenvielfalt**“
- member of the „**Interessengemeinschaft gesunder Boden**“
- community member „**Natur im Garten**“



# FIND HERE A SELECTION OF OUR **USERS:**



**Josef Engelhart**, Experimental Manager  
dept. Viticulture at the state institute for  
horticulture and viticulture  
**Veitshöchheim**

Foto: <https://www.lwg.bayern.de/verschiedenes/084608/index.php>

Castle administration  
Residenz **Würzburg**



Palace Sanssouci  
**Potsdam**



Farmers in germany such as:



**Frank Vogler**  
Farmer of the year  
2021 poultry farming  
and agriculture

Foto: <https://www.bayerischerbauernverband.de/kreisverband/bad-kissingen/frank-vogler-ist-landwirt-des-jahres-der-kategorie-gefluegelhalter-21810>

● **Frank Röder**  
cattle farming  
and agriculture



**Christian Butz**  
viticulture

<https://www.weingut-butz.de/weingut/>

● Potato and wheat growers  
**in spain**



Terra Preta project  
**in Nepal**



3500 smallholders  
for cashew trees  
and moringa farm  
**in tanzania**

● **Ethiopian farmers**  
growing cotton,  
bananas, ginger and  
vegetables

● **Farmer in Finland** for  
wheat and corn cultivation

# 1. sEM PLANTFERMENT

approx. 50 l / ha per year

Produce it  
directly on-site  
from our  
basic solution

## The benefits of sEM Plantferment

- increases the biological activity in the soil
- improves soil structure, preventing compaction
- supports the formation of humus
- increases the water retaining capacity in the soil
- reduces gas forming loss of carbon and leaching of nutrients
- enlarges the root system
- increases the resistance of the plants
- prevents rotting in the soil
- stimulates the formation of chlorophyll
- increases yields
- increases the durability of field crops
- sustainable alternative: approved for organic farming
- it is stable, can be stored for several weeks and has a pH-value of 3,2 to 3,8. Plant ferments are used in soil tillage operations



# You have 2 choices:



1.

2.

**You obtain the ready-to-use**  
sEM Plantferment activated  
(for immediate use) from us

**You produce it yourself**  
from our  
„BasicSolution plants“

**66,- € per ha**  
for quantities from

**55,- € per ha**

+ one-time costs for

**Heater**  
**Litmus paper**  
**Fermentation tank**

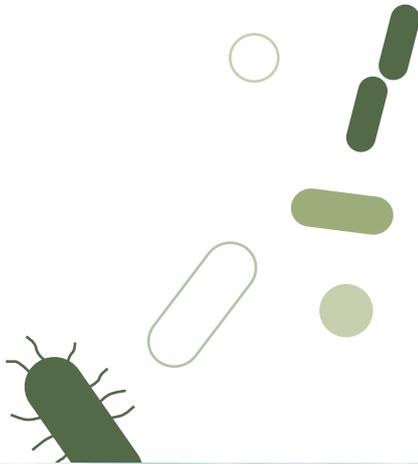
**Plantferment is produced the**  
**same way as EM-A. You can**  
**find the exact instructions for**  
**the preparation here:**

<https://youtu.be/J4Tg-KYuEsM>

## Application

Good to know!

The practical application of sEM Plantferment shows that it improves the rotting process and prevents rotting in the soil. It positively influences and rebuilds the microflora, curbs the occurrence of weeds and diseases.



**Our sEM Plantferment is best applied on top of or incorporated into the soil. The solution can be applied pure oder diluted with up to 300 liters of water.**

**A combination with sEM Kompost-Tee is beneficial.**

**Apply in spring to fall from temperatures of 12 degrees and above. sEM Plantferment is prepared in the same way as EM-A.**

**The detailed instructions for preparation can be found here:**

 <https://youtu.be/J4Tg-KYuEsM>



# sEM PLANTFERMENT explained

**The use of plant ferments in agriculture opens up new possibilities.** It shows a wide range of applications both for organic farms and in conventional agriculture.

**Plant enzymes promote the life-affirming forces in the nature through their unique combination of naturally occurring aerobic and anaerobic microorganism and soil fungi (GMO-free), with plant amino acids and extracts from earthworm humus, macro- and micronutrients (phosphorus, potassium, sodium, calcium, magnesium, copper, zinc, manganese, iron) and high value herbs.**

Our sEM Plantferment is produced through the fermentation of high value and fresh plants whose beneficial properties have been used in agriculture for generations.

Through this process, strains of anaerobic bacteria present in the plant are made available to be optimally provided to the soils and plants.

They act mainly in the anaerobic zone of the soil and the plant. Especially where problems with rot, mold, mildew and pest infestation occur, they are a great help.

The specific effective microorganisms contained in sEM Plantferment create an environment that suppresses pathogenic germs and pests and counteracts environmental pollution. With their help, not only more fertile soils and more resistant plants are promoted but also higher quality food is produced, which is particularly rich in vitamins, minerals, trace elements, amino acids and antioxidants.

In addition, humus is built up for several generations and CO<sub>2</sub> is stored.



## 2. sEM COMPOSTTEA

approx. 100 l / ha per year

Produce it  
directly on-site  
from our  
concentrate

sEM CompostTea

### The benefits of sEM CompostTea

- mainly for leaf treatment
- the vitalization of crops can reduce weed pressure
- improves photosynthesis performance
- the humus formation of the soil is supported and thus the water storage capability is increased due to a better living structure of the soil
- the symbiosis and active communication between plant and soil life is strengthened
- plant remains are converted into humus more quickly
- compressed soil is reduced and the total condition of the soil improves
- it benefits the growth and development of plants
- higher stress tolerance against toxic environmental conditions due to increased root growth of the plant
- increasing yield with reduced financial investment
- the nutritional quality of plant products increases
- sustainable alternative: approved for organic farming



# You have the following choices:



You produce it yourself with our **sEM CompostTea Teabag**

You order the already prepared **sEM CompostTea** in 5 kg buckets

You order the **sEM CompostTea Concentrate** in 2 kg bags from us and mix it with your compost

**19,90 € per ha**  
1 to 10 ha

**9,- € per ha**  
from 10 ha

**7,- € per ha**  
from 10 ha

+ one-time costs for fermenting kit

**CompostTea fermenting kit (1 to 10 ha)**  
**200,- €**

**Diaphragm pump** (15 Watt)  
**check valve**  
**Compressed air hose** (6 mm outside/ 4 mm inside/10 m)  
**Heater rod** (75 Watt)  
**EM Ceramic Pipe** (groß)

**CompostTea fermenting kit (from 10 ha) 350,- €**

**Diaphragm pump**(60 Watt)  
**Check valve**  
**Compressed air hose** (10 mm outside/ 8 mm inside/10 m)  
**Heating rod** (200 Watt)  
**EM Ceramic Pipe** (handmade)

You can find the detailed instructions for the preparation of sEM CompostTea here: <https://youtu.be/R02VLSKRKQY>

## Application

### Good to know!

As a general rule, use good chlorine-free, activated water with low lime content at temperature between 24 and 30 degrees and a pH value of approx. 7.

Dissolve CompostTea-concentrate in water and aerate **up to 300 liters for 24 hours** and **from 300 liters for 48 hours**. The concentrate can then be filtered and **should be applied within 48 hours**.

When using a sprayer, the **nozzle pressure** should not be higher than **2 - 3 bar**.

CompostTea can be applied to **all crops every 2-3 weeks from emergence**.

Treatment with sEM CompostTea can **be carried out until flowering**.

**Foliar treatment** should be completed 90 days before harvest or after flowering of fruit trees. **During this period, the use of sEM Plantferment is preferred**.

Any chemical fertilization and plant protection measures represents an interference with the diversity of soil microorganisms. Consequently, treatment with sEM CompostTea after such measure is important.

**The treatment should be finished 3 weeks before harvest**.

**You can find the detailed instructions for making our sEM CompostTea here:**

→ <https://youtu.be/R02VLSKRKQY>



## sEM COMPOSTTEA explained

sEM CompostTea is a formula in which the microorganisms from the compost are filtered and multiplied. The nutritive substances (barley malt syrup, rock flour and humic substances) for the microorganisms and the added catalysts promote and direct the multiplication. These can then be applied to the soil of the field, as well as to the leaf. It does not act directly as a fertilizer, but as a catalyst for life-sustaining and strengthening processes in the soil and on the leaf surface. This restores living microorganisms to the soil and results in long-term soil improvement and stabilization. The plants grow better, are healthier and stronger. The sEM CompostTea treatment activates the microorganisms (bacteria).



## Studies

Following studies confirm the benefits of **Effective Mikroorganisms**:



**Bavarian State Institute for Viticulture and Horticulture:** Department of Viticulture and Quality Management, Table Grapes, 15.05.2013- rapid humus increase of 2 %, taste improvement of ripe table grapes, loosening of the soil and strengthening of water retention capacity.



**Research on the nutritional and health effects of foliar spraying of vines with preparations based on microorganism mixtures**

Alberto Vercesi, Mario Fregoni, Matteo Gatti and Luca Gualdana

### **CONCLUSIONS**

The EM preparation proved to be by far the best option for Peronospora control (*Plasmopara viticola*), especially when Cu was added (100 g/hl). From a nutritional point of view, it was found that the EM preparation significantly improved the iron content of the leaves, promoting the yield capacity of the vines.



**Weihenstephan University of Applied Sciences, Department of Agriculture and Food Science:** Diploma thesis by Claudia Rackl Experimental Station for Special Crops in Wies under the direction of Dr. Claudia Mack, mildew in field-grown cucumbers with plant strengthening agent.

[link to the study](#)

## Studies

The following studies confirm the benefits of **Effektive Mikroorganismen**:



**University of Natural Resources and Applied Life Sciences, Vienna**  
Influence of treatment with EM on tomato in protected cultivation.

### Results and discussion

This is a trial carried out under the conditions of organic farming, according to the Regulation „EUVO2092/91“ of the European Union. In both years, a higher germination rate and an earlier plant emergence were observed in the **EM variant**. A **significantly higher total yield** of marketable fruit was obtained in the EM rock meal treatment compared to the untreated control variant in both years. In addition, there were significantly fewer fruits with blossom end rot in the EM variant than in the control in 2007 (3% vs. 31%, Figure 4). In both years, higher levels of chlorophyll „ab“ and chlorophyll „a“ were observed in the EM variant. An increase in total microbial biomass (Cmic and Nmic) in the substrate was observed in the **EM variant**, which is confirmed by a higher C and N mineralization at both study dates in 2007. The lower content of available nutrients in the EM variant had no negative effects on yield and quality; on the contrary, the initially enormously high Nmin content in the control may even have been partly responsible for the poorer plant health in this variant. The „nsLTP“ allergens were detected in the tomatoes of the control variant, but not in EM rock meal variant. The number of biophotons was higher in the control group than in the EM variant, indicating increased stress in the control.



**Dissertation Dipl. Ing. Ndona Kayamba Roger** on yield and disease tolerance in tomatoes.

**Result: Yield increase through EM**

[link to the study](#)

## Studies

The following studies confirm the benefits of **Effektive Mikroorganismen**:



**Weihenstephan-Triesdorf University of Applied Sciences**, Diplomarbeit  
Nina Jungbauer, 20.09.2010

### **Effect of Effective Microorganisms in horticultural soils**

#### **Conclusions**

„The photosynthetic bacteria provide an increased production of antioxidants in the soil,... thus, it is possible for the plant to take up food with less energy, to store it specifically and thus to thrive faster and more vigorously. The ferment-active microorganisms provide a „detoxification, as well as a „synthetic“ preparation of the soil. This process ensures efficient use of the organic material and suppresses disease-promoting fungal species in the soil...“



**Research in European countries by NDONA et al. (2007), HOFFMANN (2004), HERR (2007) und OSKORSI et al. (2008) show that the use of effective microorganisms to cultivate plants, reduces germination time, promotes root formation, makes the plant grow stronger and more vigorous, increases quality and yield, and reduces disease infestation in the plants tested.**



**Experiment in sunflowers against powdery mildew 2020** by the Institute of agriculture Hesse | Horticultural Center. EM from Eußenheimer Manufaktur **best effect on powdery mildew.**

You can get further information here:

**Eußenheimer Manufaktur UG**

An der Tabaksmühle 3

97776 Eußenheim

Tel: 09353996301

Mai: kontakt@eussenheimer-manufaktur.de

www.eussenheimer-manufaktur.de

**Eußenheimer Manufaktur** uses part of the revenue to support organizations and aid programs in developing countries around the world. This contribution helps to improve the living conditions of the people there. (e.g. after floods, earthquakes etc.).

The purchase of products from Eußenheimer Manufaktur therefore helps people who need support.

The use of EM, a highly effective and natural product, also makes a direct contribution to a sustainable society and environment.

We believe nature is our home.

