Eußenheimer Manufaktur®

We produce **the futures fertilizer**

FOR A BETTER WORLD

EM inside

bio

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 supply

the pre- and probiotic components for regenerative agriculture

sEM PLANTFERMENT

We offer an **exclusive herbal blend** from an **intensive fermentation process** with over **85 naturally occurring aerobic** and **anaerobic microbial strains** and **soil plices** (GMO-free). With **plant amino acids** and **extracts from earthworm humus, macro- and micronutrients** (phosphorus, potassium, sodium, calcium, magnesium, copper, zinc, manganese and iron).

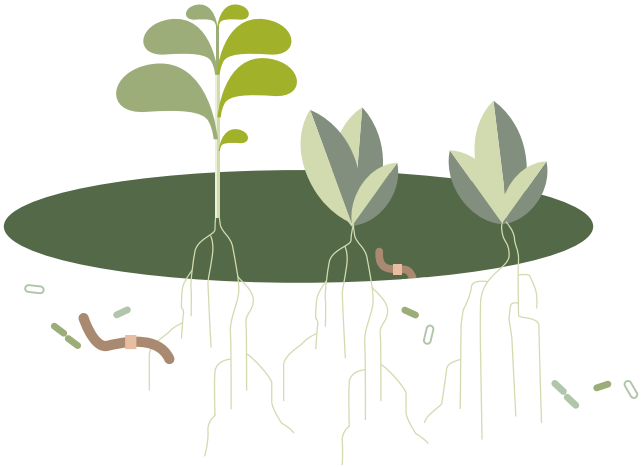
INDIVIDUAL CONCEPTS

We advise, train and develop concepts for your country:

1. on site
2. on our farm campus in Tanzania

Join us in transitioning to regenerative and sustainable agriculture!

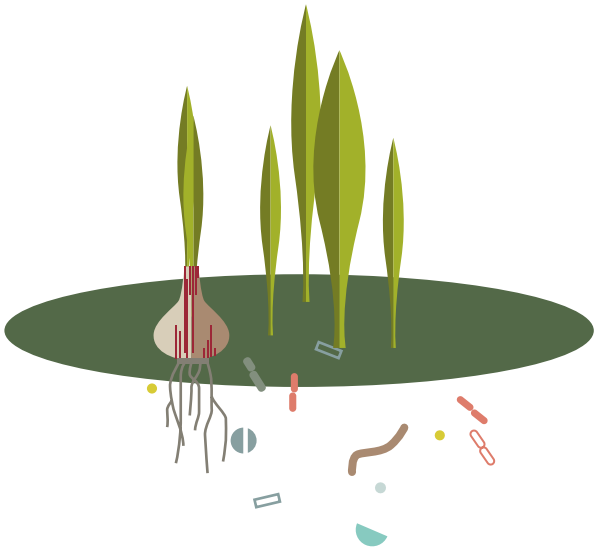
sEM Pflanzenferment



YOUR BENEFITS:

- **healthy** crops
- **low costs**
- **less** weeds
- **humus growth** and CO_2-storage
- **healthy soil** for upcoming generations
- effective **plant protection**
- **less** effort
- **water retaining capacity** in soils will **increase**
- approved for **organic agriculture and horticulture**

Photos: Our display garden & vineyard, Nepal



BENEFITS **OF REGENERATIVE AGRICULTURE**

- **Biodiversity and** no species extinction
- **high-quality food**
- **sufficient food** for all people
- **a steady climate**
- **clean water**
- **peace**
- **resilient soil conditions**
- **nature remains in balance**
- **regional supply** possible

WE ARE HERE FOR **YOU** WITH:

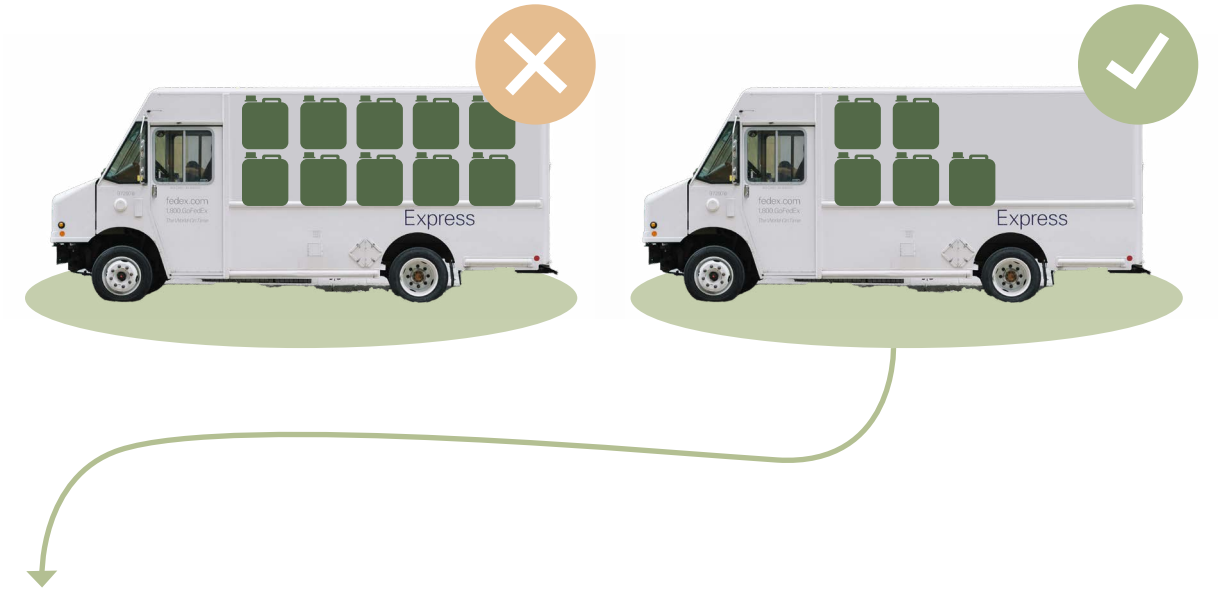
- **20 years** of **fermentation experience**
- **experts** for **agriculture** and **microbiology**
- **worldwide experience** and **individual on-site consultations**
- **unique concept development** to match your needs
- **second production site in Tanzania** for farmers in Africa
- **certified organic** products
- **GMO-free** products
- **soil fungus, aerobic und anaerobic bacterial strains**
- **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“**

Photos: our production-site, Tanzania, our vineyard

WHAT MAKES OUR PRODUCTS SO **UNIQUE**?



We supply **concentrates,** because:

- **easier to store**
- **easiert to transport**
- **less sensitive** to weather conditions
- **longer** durability
- **weight reduction during transport** results in **CO_2-savings**
- **easier processing**
- **no plastics**

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

Palace Sanssouci **Potsdam**

Castle administration Residenz **Würzburg**

Farmers in germany such as:

Frank Vogler Farmer of the year 2021 poultry farming and agriculture

Foto: https://www.bayerischer-bauernverband.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/

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

Potato and wheat growers **in spain**

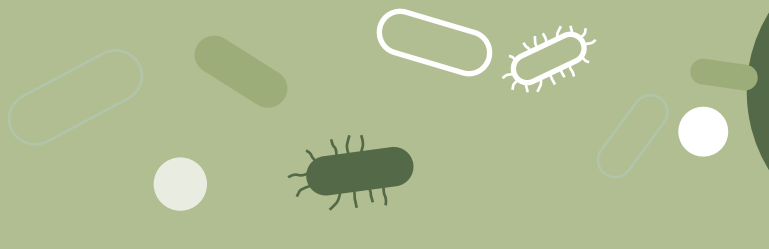
Terra Preta project **in Nepal**

Ethiopian farmers growing cotton, bananas, ginger and vegetables

Farmer in Finland for wheat and corn cultivation

1. sEM PLANT**FERMENT**

approx. 50 l / ha per year



Produce it directly on-site from our concentrate

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**

We offer the following **possibility**

You make your own „basic plant solution“ from our EM concentrate yourself

500 g EM concentrate
+ 1 l sugar cane molasses
= 33 l base solution plants

from 33 l basic solution plants you get **1000 l ready-made plant ferment that is enough for 20 hectares**

Plant ferment is produced just like EM-A.
The exact instructions for the preparation can be found here:

https://youtu.be/J4Tg-KYuEsM

1000 l ready to use **Plant ferment**

- **as a liquid fertiliser**
- **to revitalise your soils**
- **for the production of natural pesticides and fungicides**
- **for the production of Bokashi and Terra Preta**
- **to accelerate the composting process**
- **for upgrading compost and manure**

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 occurence 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 preperation can be found here:

https://youtu.be/J4Tg-KYuEsM

sEM PLANT**FERMENT** 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 agriulture.

Plant enzymes promote the life-affirming forces in the nature through their unique combination of naturally occuring 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 Plant-ferment 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_2 is stored.

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 perparations 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 preparate 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 Mikroorganisms:**

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 Mikroorganisms:**

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.**

Eußenheimer Manufaktur®

You can get further information here:

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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.

NATUR im GARTEN Gütesiegel

VEN Verein zur Erhaltung der Nutzpflanzenvielfalt e.V.

AöL Die Öko-Lebensmittelhersteller

Interessengemeinschaft gesunder Boden

em inside

bio

As of: 23.02.2023