

# INTRODUCTION OF EFFECTIVE MICROORGANISMS

Hisanori Asami  
EM Research Organization, Inc



## Message

EM Research Organization, Inc. (EMRO) was founded in 1994 for the purpose of social contribution via EM.

EM Research Organization, Inc. (EMRO)はEMを通じた社会貢献を目的に1994年に設立されました。





Company information  
会社情報

Established  
設立  
in 1994

Staff  
72

Executives  
4

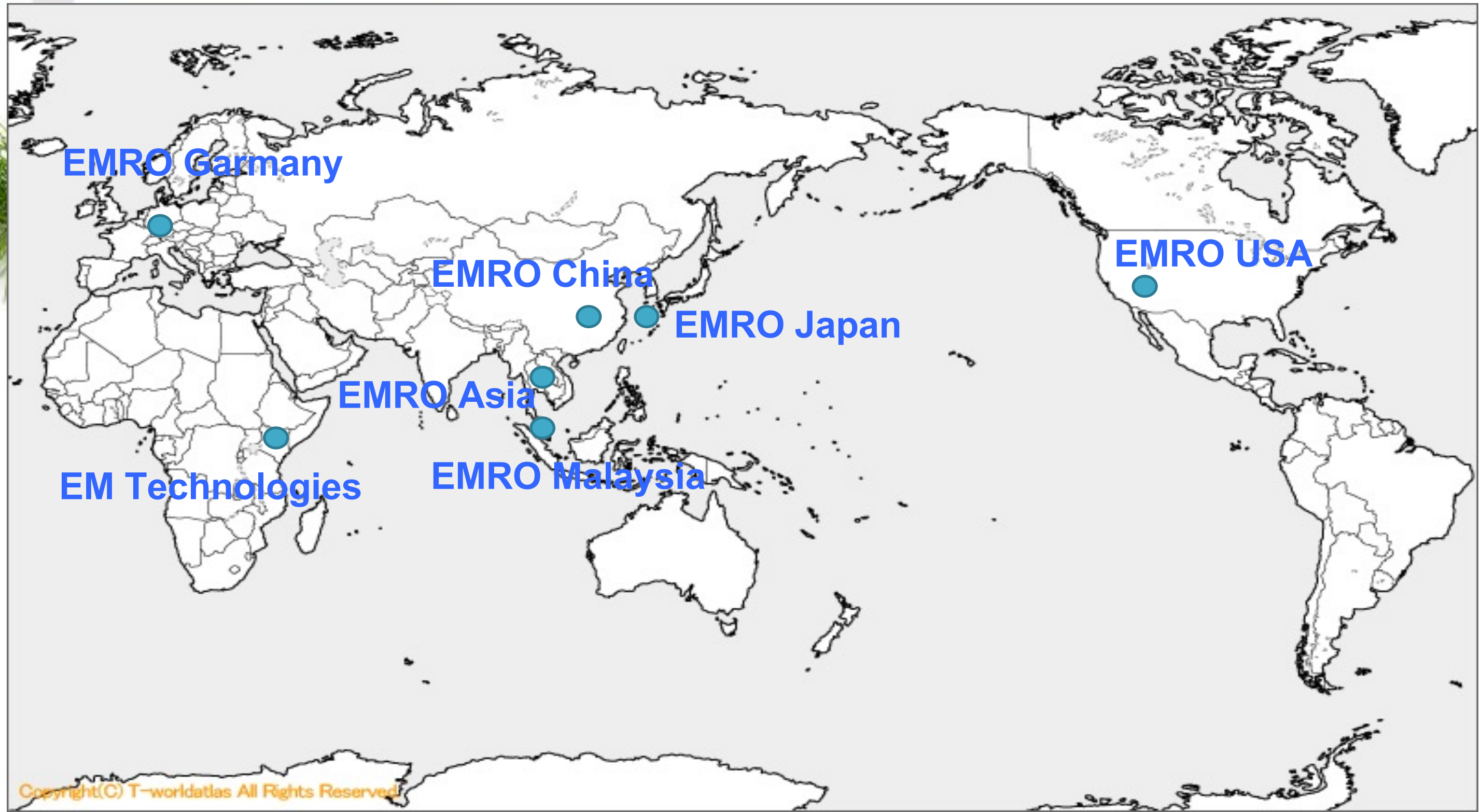
President : Shin Higa

Head quarter  
1478 Kishaba, Kitanakagusuku-Son,  
Nakagami-Gun, Okinawa

Founder  
Developer of EM : Dr. Teruo Higa

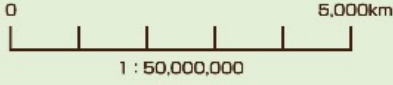
Investing Company  
出資会社

EMRO's Overseas Affiliated Companies  
EMRO海外関連会社



# 世界に広がるEM技術

EM TECHNOLOGY ALL OVER THE WORLD



※2014年1月現在

## Overseas Network of EM・1 EMネットワーク

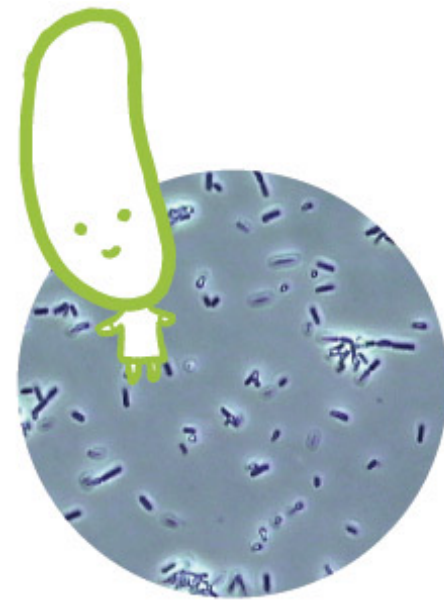
Manufactured in 56 countries

製造国56カ国

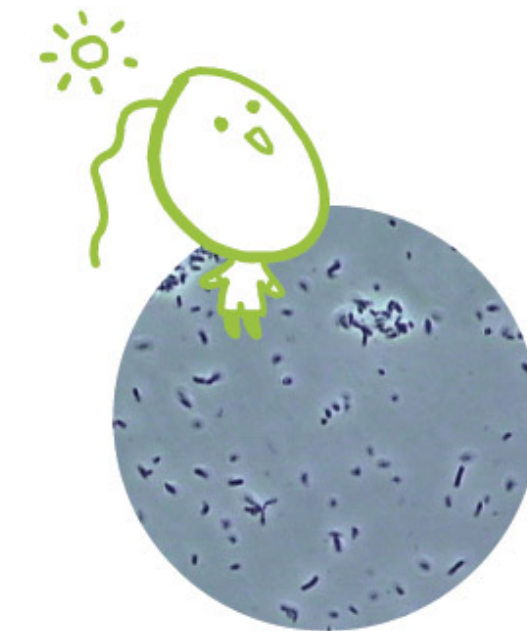
Used in more than 110 countries

使用国 110カ国以上

**E**ffective **M**icroorganisms is mainly consist of  
有用微生物群 (EM) を構成する菌



Lactic Acid Bacteria  
乳酸菌



Phototropic Bacteria  
光合成細菌



# OMRI Listed®

The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program Rule.

### Product

EM•1 Waste Treatment  
Company

EM America  
Mr. Eric Lancaster  
19371 US Hwy 69 S.  
Alto, TX 75925

### Status

Allowed

### Category

Microbial Products

### Issue date

06-Dec-2002

### Product number

ema-9948

### Class

Crop Fertilizers and Soil Amendments

### Expiration date

01-Dec-2009

### Restrictions

Not Applicable.

Product Review Coordinator

Executive Director

Product review is conducted according to the policies in the current *OMRI Policy Manual* and based on the standards in the current *OMRI Standards Manual*. To verify the current status of this or any OMRI Listed product, view the most current version of the *OMRI Products List* at [www.omri.org](http://www.omri.org). OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator's responsibility to properly use the product, including following any restrictions.



Organic Materials Review Institute  
P.O. Box 11558, Eugene, OR 97440-3758, USA  
541.343.7600 · fax 541.343.8971 · [info@omri.org](mailto:info@omri.org) · [www.omri.org](http://www.omri.org)



B.F.A.  
CERTIFIED

Certification No: AI 318

## BIOLOGICAL FARMERS OF AUSTRALIA

Accredited with Australian Quarantine Inspection Services

This is to certify that:

*Koh-Keh International (Australia) P/L*  
Nurcowng Road - McCredden Road  
Mitre via HORSHAM VIC 3400  
(RMB 9108 HORSHAM VIC 3401)

has fulfilled the requirements adopted from time to time as detailed in the AQIS National Standards for Organic and Bio-Dynamic Produce 2<sup>nd</sup> Edition and the BIOLOGICAL FARMERS OF AUSTRALIA Standards for Organic and Bio-Dynamic Produce Version 3, in respect of

EM-1

Expiry date: 31<sup>st</sup> August 2002  
(Or until such time as this certification is earlier withdrawn)

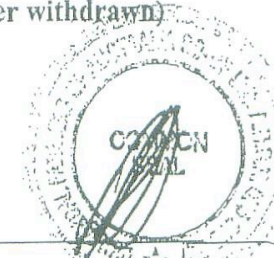
Dated 24 May, 2001



Quality  
Endorsed  
Company  
ISO9002 Lic 12619  
Standards Australia

Director:

Secretary:



BIOLOGICAL FARMERS OF AUSTRALIA CO-OPERATIVE LTD Operating as  
BIOLOGICAL FARMERS OF AUSTRALIA  
PO BOX 3404 Village Fair Qld 4350

EFFECT OF EM•1®

## EMの効果

Helps you **reduces costs.**

コスト削減効果

Helps you to keep **soil healthy.**

土壌の健全化

Helps you to **keep yield.**

収量の維持

**Its safe, easy to use and low cost.**

安全、簡単、低コスト、持続可能な技術

**Its sustainable !**

Photo: Area of **5.200 Hectares** of sustainable grain production.

*Credit to Rogério Aoyagui*



QUALITY IS THE KEY - ACTIVATION IS QUALITY

EM培養液に品質がカギ

## HOW TO ACTIVATE EM•1®

EMの培養方法

5% EM•1®

5% Molasses (糖蜜)

90% Clean Water (水)

Easy setup !

作り方は簡単

Photo: Area of 5,200 Hectares of sustainable grain production.

Credit to Rogério Aoyagui

ACTIVATION PROCESS  
EM培養の様子



EM•5®

Photo: Activating EM•1® and EM•5®.

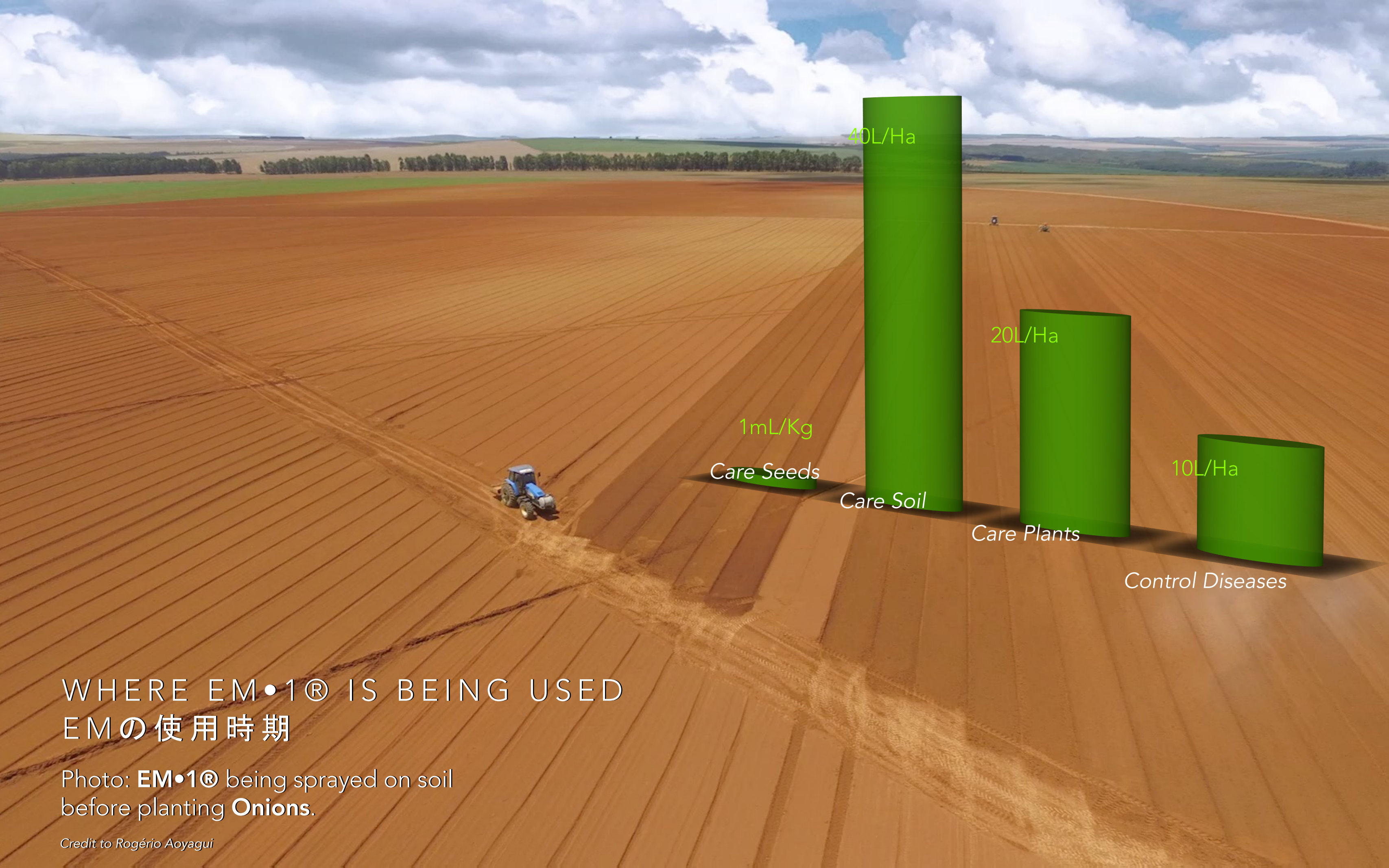
WHAT YOU CAN SEE IS WHAT WORKS!

発酵の様子



Photo: Activated EM•1®.

Credit to Rogério Aoyagui



1mL/Kg  
Care Seeds

40L/Ha  
Care Soil

20L/Ha  
Care Plants

10L/Ha  
Control Diseases

# WHERE EM•1® IS BEING USED

## EMの使用時期

Photo: EM•1® being sprayed on soil before planting Onions.

Credit to Rogério Aoyagui



1mL/Kg  
Care Seeds

20L/Ha  
Care Soil

5L/Ha  
Care Plants

5L/Ha  
Control Diseases

AFTER SECOND YEAR  
2年目におけるEMの使用時期



## HOW EM•1® IS BEING USED

### EMの使用方法

**On Seeds** - mixed with inoculants during seeds treatment

種子処理：種子とEM希釈液を混合する

**On Soil** - injected on furrow during planting or spray on soil.

土壌：耕耘中や定植中に注入

**On Plants** - sprayed over plants before closing lines.

植物：葉面散布

**On Disease and Pests** - sprayed mixed with agrochemicals.

病害虫対策：農薬・除草剤と一緒に散布

Photo: **EM•1®** being sprayed on soil  
before planting **Garlic**.

*Credit to Rogério Aoyagui*

CARING SEEDS WITH EM•1®  
EMの種子処理



Photo: Soybean and bean seeds treatment with EM•1®.

Credit to Cid Simões

RESULTS OF SEED TREATMENT  
EMの種子処理が大豆の生育に与える影響

EM•1®



Photo: Soybean seed treatment with EM•1®.



# RESULTS OF SEED TREATMENT

## EMの種子処理が大豆の生育に与える影響



EM•1®

EM-1

TESTEMUNHA

INOCULANTE

AREA 8

Photo: Soybean seed treatment with EM•1®.

Credit to Lúcio Magalhães de Jesus



Photo: Tractor adapted to apply EM•1® while prepare the soil.

Credit to Rogério Aoyagui



Photo: Planter Machine adapted to apply EM•1® while planting the seed in the soil.

Credit to Rogério Aoyagui

RESULTS OF CARING SOIL  
土壌の様子



Photo: Soil worked with EM•1®.

Credit to Rogério Aoyagui

RESULTS OF CARING SOIL  
土壌の様子

Photo: **Life Back to the Soil** worked with  
**EM•1®**.

*Credit to Cid Simões*

DISEASE CONTROL WITH EM•1®  
業害虫対策



Photo: **Spraying EM•1®** directly on Corn Field.

*Credit to Cid Simões*



Yield Average  
収量

**With EM•1®**

**Control**

3,111 Kg/Ha

2,820 Kg/Ha



**10%**

Corn

トウモロコシ

Photo: **Corn Field Development** worked with  
**EM•1®**.

*Credit to Cid Simões*



Yield Average  
収量

**With EM•1®**

161 sc/Alq.  
14,0% Humidity

**Control**

156 sc/Alq  
15,2% Humidity



**3,2%**

Wheat  
小麦

Photo: **Wheat and Canola** treated with **EM•1®**,  
growth and staking expressively higher.



Yield Average  
収量

With EM•1®

Control

63,8 sc/Ha

60,8 sc/Ha

↑ 4,9%

Soybean  
大豆

Photo: Soybean Yield improved with EM•1®.

Credit to Rogério Aoyagui



Before EM•1®  
使用前

Photo: Soybean Area affected by nematodes.

Credit to Rogério Aoyagui



1 Year After EM•1®  
1年後

Photo: Soybean Recovered Area affected by  
nematodes.

Credit to Rogério Aoyagui

CROPS HEALTHIER THAN EVER !  
これまでで一番よい生育状況

Photo: Soybean Crop Healthy Improved with  
EM•1®.

*Credit to Cid Simões*

Average Production and Costs of Soybean with EM•1®  
大豆栽培における収量とコスト  
(127,000 Ha)

