

ROOTZONE GROUP

40 years of experience in developing sustainable biotechnologies

BACCESS A/S
Bio technology

BioFertilizer For a Sustainable Future



Danish Rootzone
Transform
Transform ApS af 1994

Water and Air Purification – All by Nature



BIOFERTILIZER AFRICA LTD

ROOTZONE AFRICA LTD

BIO TRANSFORM LTD – KENYA

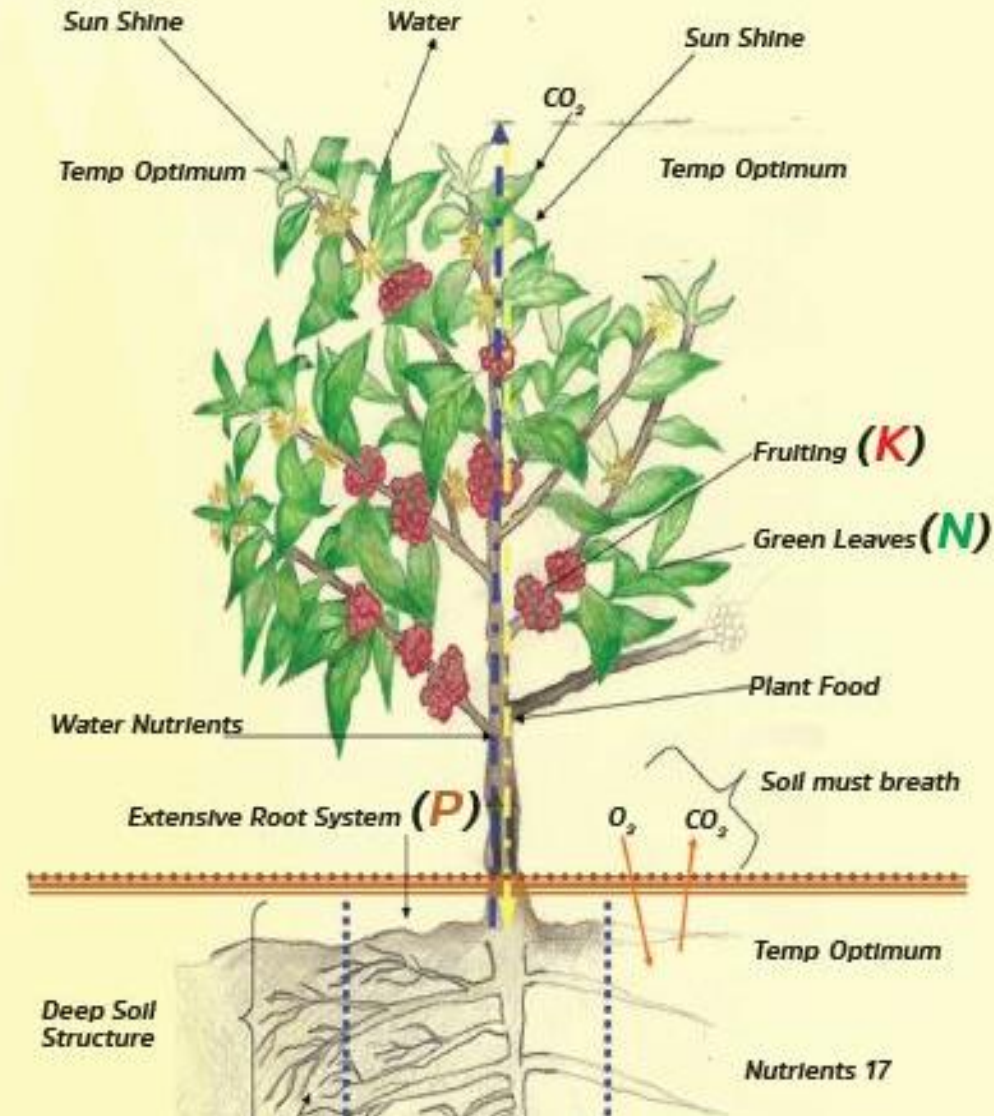


Engineering and Innovating Bio Sustainable Solutions

BIO-CIRCULAR SOLUTION FOR REGENERATIVE AGRICULTURE

CLIMATE ADAPTATION SOLUTION FOR SUSTAINABLE FOOD PRODUCTION

WASTE2VALUE
BACESS BIOFERTILIZER
PRODUCTION UNIT
CONVERTS
ORGANIC WASTE TO
VALUABLE BIOFERTILIZER

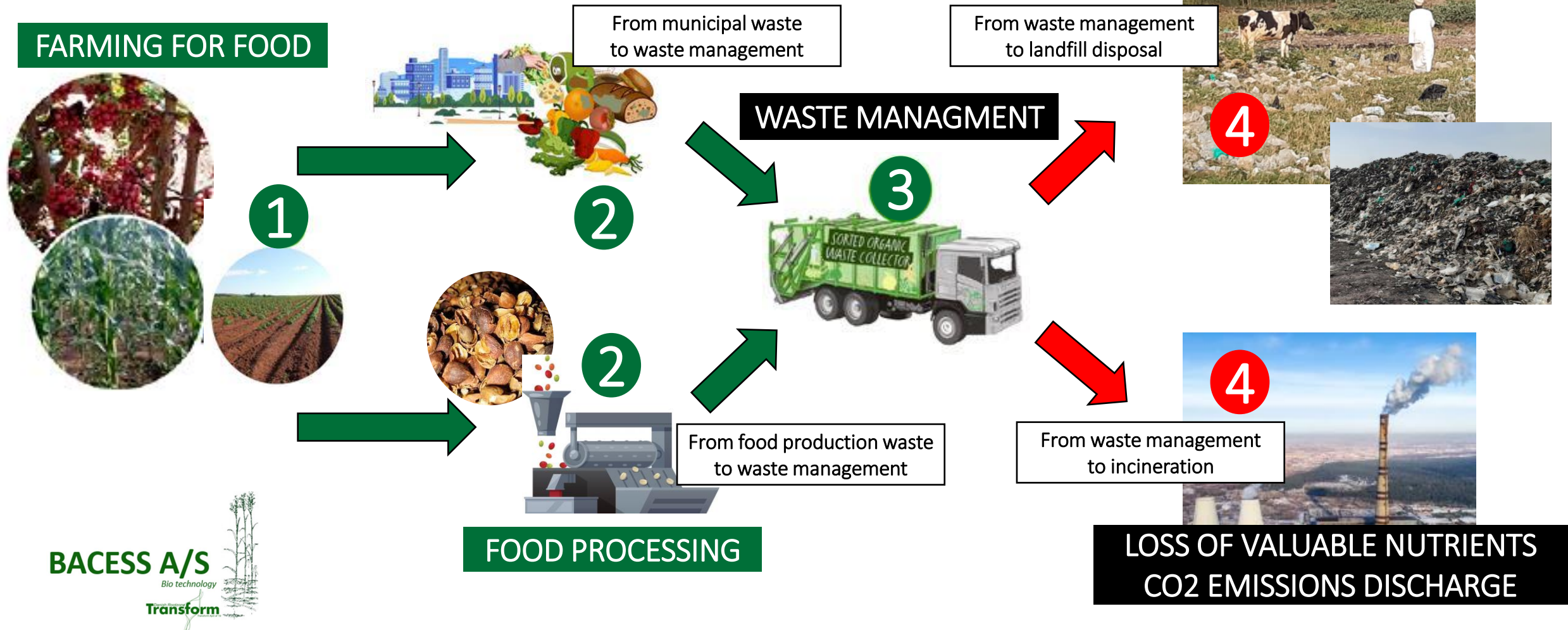


1 The Challenge - The Linear Business Model

28% of GHG emissions come from landfill, waste incineration and solid waste management collectively

URBAN FOOD CONSUMPTION

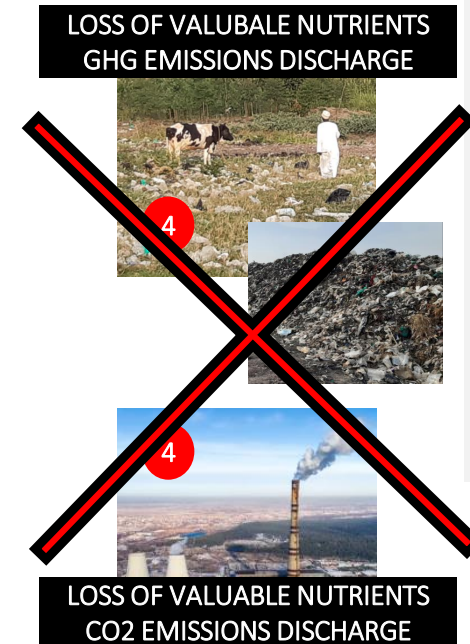
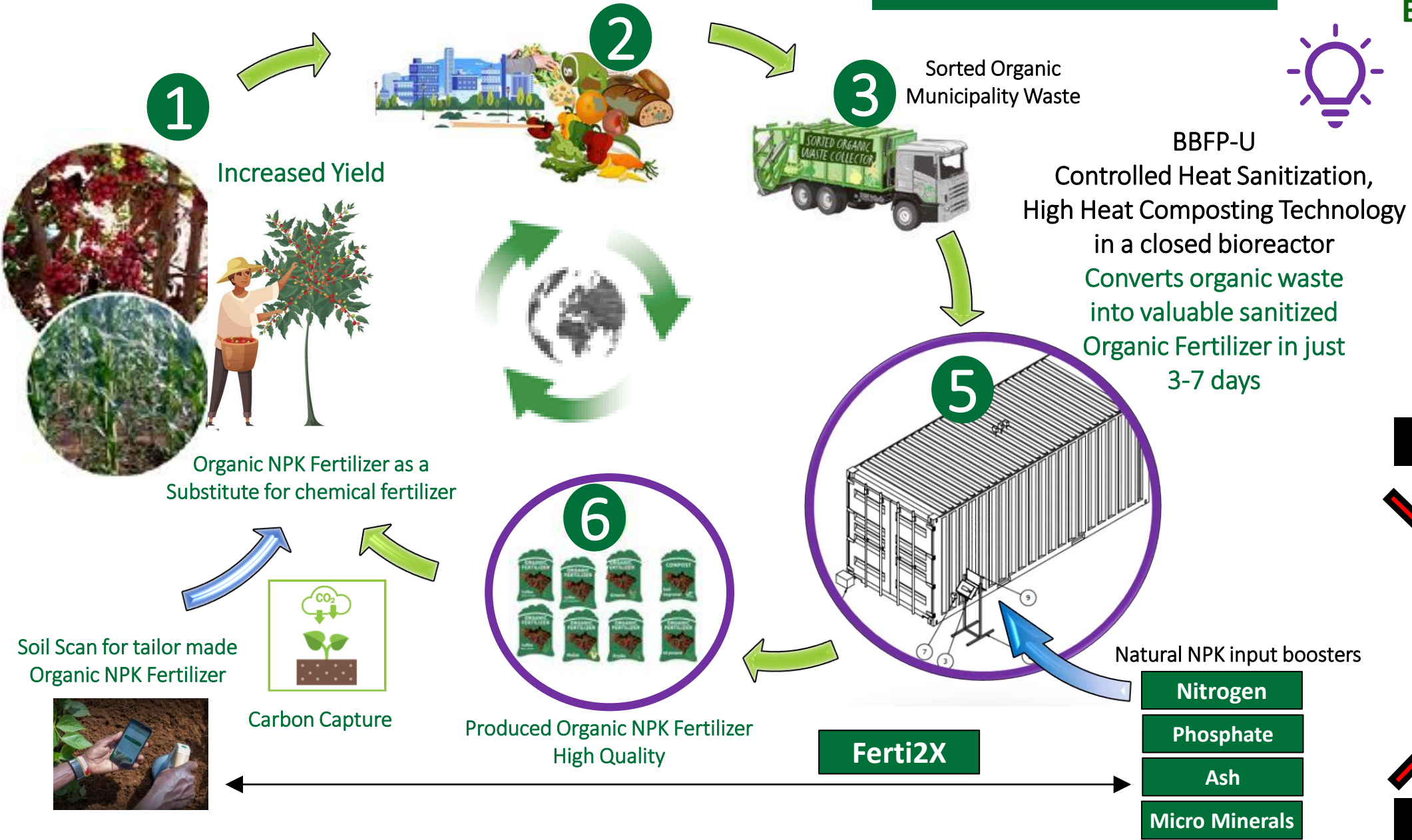
FARMING FOR FOOD



2 The Solution – BACCESS Bio-Circular Business Model

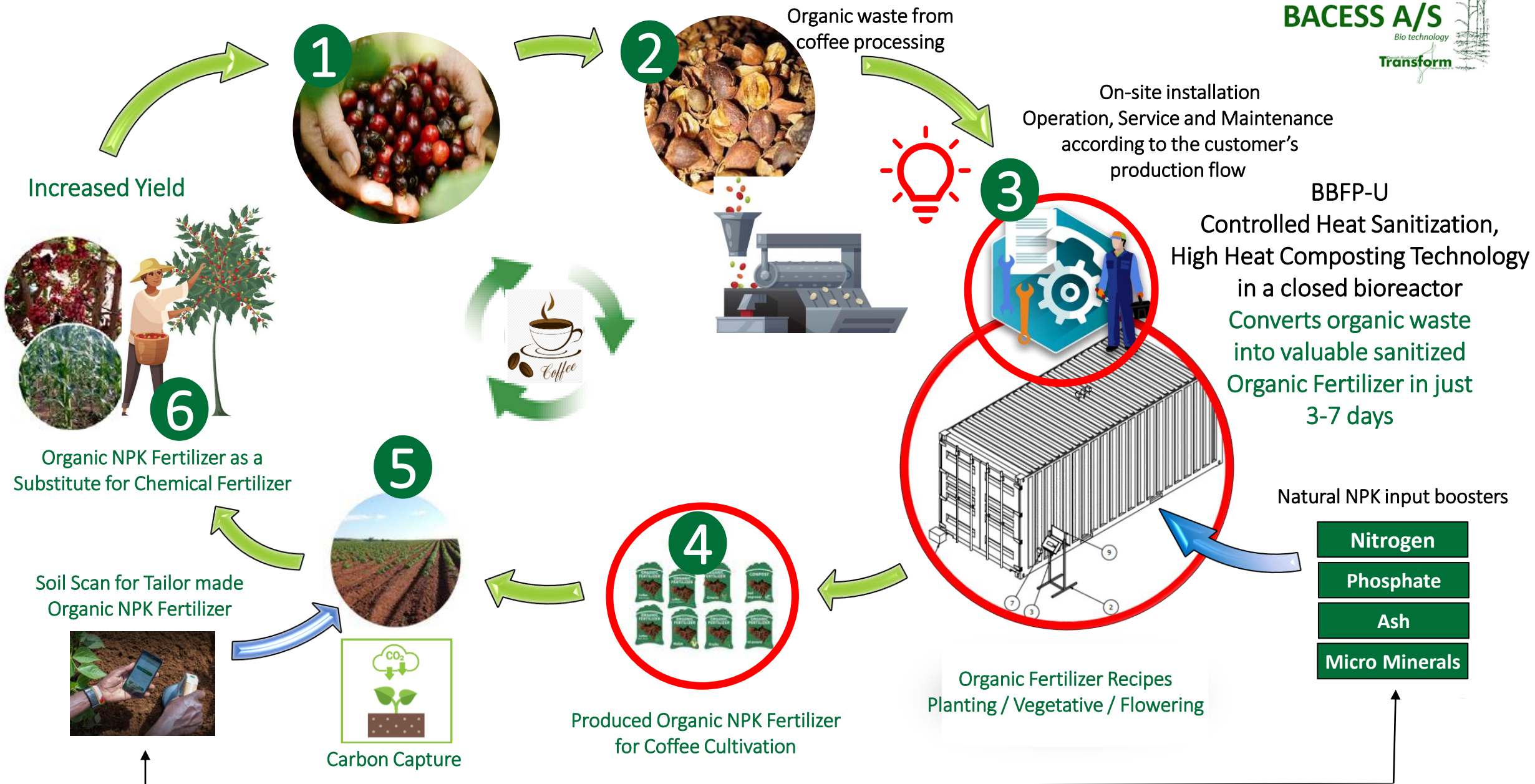
CLIMATE ADAPTATION SOLUTION
REGENERATE FOOD SUPPLY CHAIN

BACCESS A/S
Bio technology
Transform



- Climate Change
- Degraded soil
- Low yield for farmers
- When crops are harvested, nutrients and carbon are removed from farmland
- The residue from coffee processing is often used for incineration or ends at landfill
- Use of climate-damaging chemical fertilizers and pesticides - both during production and use
- Lack of access to quality fertilizer for small scale farmers - primarily due to import and price
- Plant disease spread due to lack of controlled sanitization/hygienization of residual biomass before reuse
- Lack of knowledge and training in regenerative farming





- CLIMATE ADAPTATION SOLUTION
- Upcycling the residue – by adding natural nutrient boosters – keep it in the loop – highest farmer value
- Makes high quality organic fertilizer available for farmers
- Increased yield = Increased livelihood = Increased production
- Bring back the carbon and nutrients to the soil and farmland
- Raise the organic matter in soil – increased biodiversity
- 3xC = Clever Carbon Capture
- Increased crop quality (better coffee)
- Organic agriculture and coffee production
- Suppresses the occurrence of plant diseases as well as water-retaining effect
- Avoid incineration and landfill GHG emissions – avoid loss of valuable nutrients

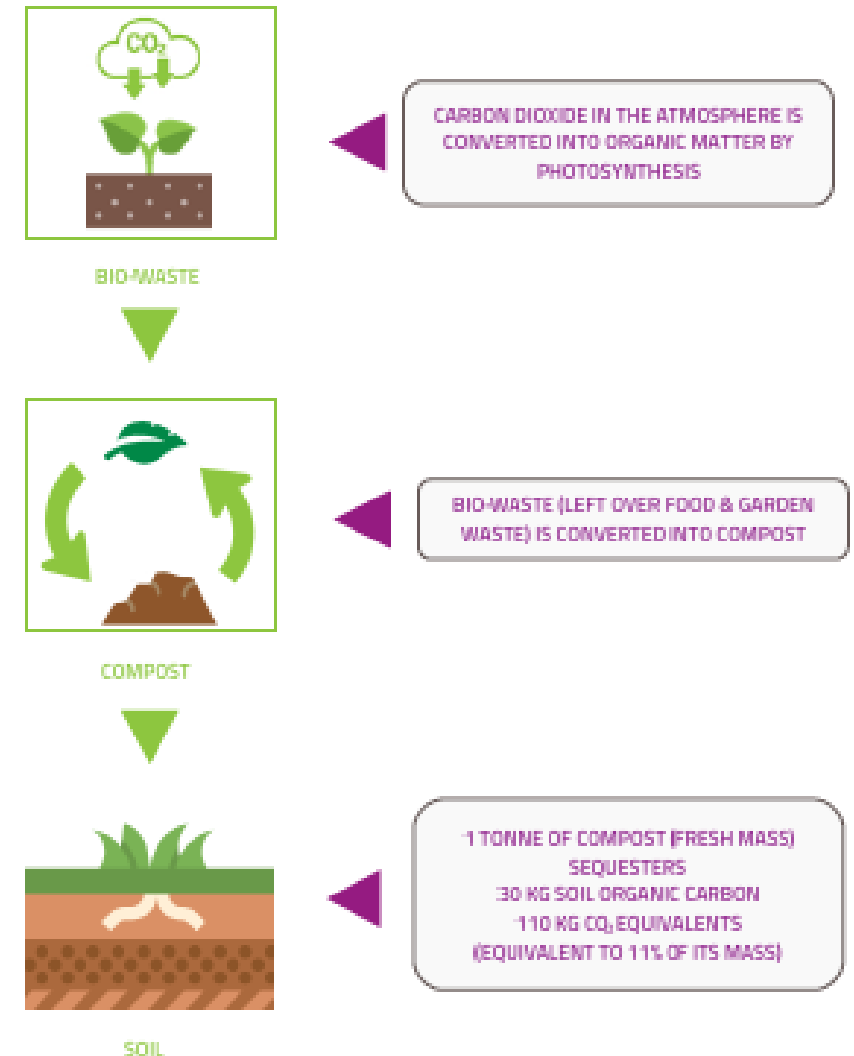


- **Biofertilizer Concept specifically developed for sustainable food production**
 - ✓ Organic NPK fertilizer nutrient boosted according to soil type and crop cultivation
- **Waste Management**
 - ✓ Efficient recycling of nutrients from organic waste
 - ✓ Keep organic in the loop
 - ✓ Closed bio-reactor without climate-damaging GHG emissions discharge
- **European Environmental Technology Verification (ETV)**
 - ✓ Sanitization of biomass (according to international standards)
 - ✓ Fast processing time 3-7 days
 - ✓ Scalable and modular design (Standard Unit Capacity – 1,000MT input/year)
 - ✓ PLC (Programmable Logic Controller)
- **Reduce Carbon Footprint – Scope 1,2 & Supply Chain Scope 3**
 - ✓ CSRD (Corporate Sustainability Reporting Directive)
 - ✓ ESG (Environmental, Social, Governance)
 - ✓ CSR (Corporate Social Responsibility)
 - ✓ SDG (Sustainable Development Goals)



Soils with low levels of organic matter can be improved by regular applications of quality compost. This has many benefits:

- A fraction of the organic matter in compost is converted into a stable form called 'humus' - this remains in soil for many years.
- Every tonne of soil organic carbon holds the equivalent about 3.67 tonnes of atmospheric carbon dioxide.
- For every tonne of compost (fresh mass) applied to soil between 60 - 150 kg of carbon dioxide equivalents can be sequestered (stored).





Completely developed and in operation

DANISH TECHNOLOGY

HIGH TEMPERATURE
COMPOSTING SYSTEM



BACESS A/S

Bio technology

Transform

ENGINEERING SUSTAINABLE SOLUTIONS

WASTE TO VALUE



BIOFERTILIZER WITH FULL NPK

BIOFERTILIZER AFRICA LTD

Plot 32 Ntinda Road, Ntinda Complex Suite F2 - 09, Block C Kampala

P. O. Box 356, Ntinda Kampala.

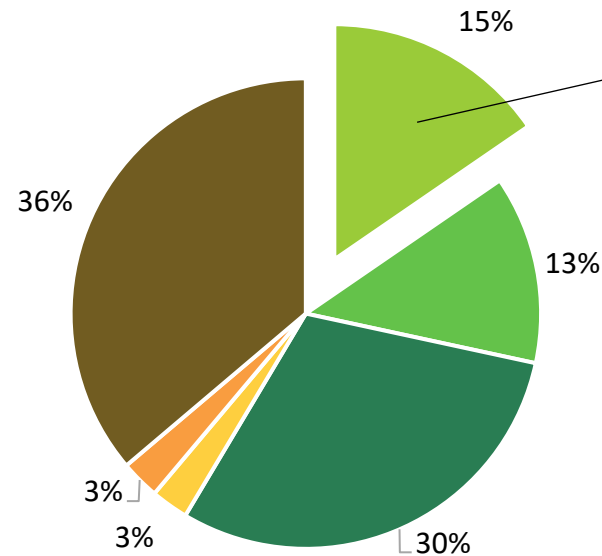
Tel: +256 393 215 709

Email: inquires@rootzoneafrica.com

Website: www.rootzoneafrica.com

The Need in Uganda's Coffee sector - Size and Segmentation

TOTAL AGRICULTURAL AREA OF EAST AFRICA
447.387.00 HEKTAR

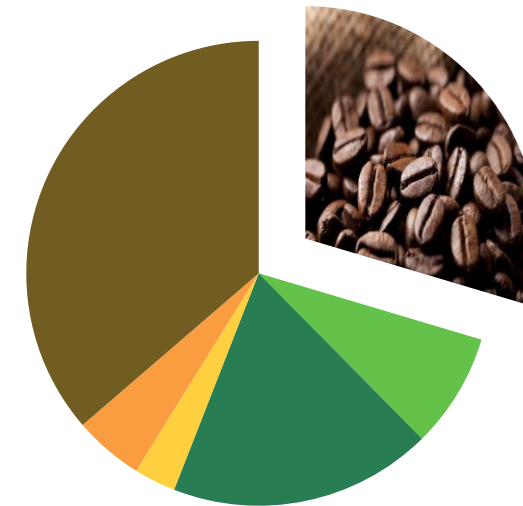


■ Uganda ■ Kenya ■ Tanzania
■ Rwanda ■ Burundi ■ Ethiopia

UGANDA'S AGRICULTURAL AREA
CONSTITUTES 6,900,000 HECTARES
CORRESPONDING TO A BIO FERTILIZER
POTENTIAL OF 1,035,000 TONS PER. YEAR.

**A 50% increase in coffee yields could
increase Uganda's export revenue by
US \$ 100-120,000,000 / year**

IN UGANDA, COFFEE IS THE MOST IMPORTANT
COMMERCIAL PRODUCT COVERING 428,000
HECTARES WITH A POTENTIAL OF 64,200 TONS
OF BIO FERTILIZER PER. YEAR.
TODAY, CHEMICAL FERTILIZER IS APPLIED AT
APPROX. 8.2% OF THE AREA



■ Uganda ■ Kenya ■ Tanzania
■ Rwanda ■ Burundi ■ Ethiopia



UGANDA

Coffee yield is in the level between 600-900 g/bush, it should be 3-4kg (3-4000kg/ha).

This is because of lack of fertilizer and pest in production.

Professor
Julius Yefusa
Kitungulu Zake



BIOFERTILIZERS KILL PESTS
AND DISEASES
THUS INCREASE IN YIELDS.

I consequently welcome the project of turning garbage into fertilizers by BACCESS A/S & Transform af 1994 through its affiliate Biofertilizer Africa Limited, operating in Uganda as it is one way of recycling the nutrients back into the fields, since most of the garbage material (over 70%) consist of organic residue. This is the way highly leached soil can be made to improve production and productivity.

Plot ID Nakaseke-Busana Cooperative	Biofertilizer Kg applied per bush/tree	Average Kg harvest yield per bush/tree	Average weight of 100 Fresh coffee berries (g)	Twig Borer (BCTB)	Coffee Wild Disease (CWD)	Red Blister Disease (RBD)
Co (Control)	0,0	1,2	96	Yes	Yes	Yes
T1	1,5	4,6	131	No	No	No
T2	3,0	4,9	154	No	No	No

Date (DD/M/Yr)	Plot ID	No. of coffee plants	No. of harvestable coffee plants	No. of unproductive plants	Total Fresh weight of harvested coffee (kg)	Weight of 100 coffee berries (g)
03.10.2022	Co	10	8	2	2	111
	T1	10	9	1	13,5	132
	T2	10	10	0	6,5	174
10.10.2022	Co	10	8	2	1	104
	T1	10	9	1	5	160
	T2	10	10	0	6	177
17.10.2022	Co	10	8	2	4	86
	T1	10	9	1	8,5	112
	T2	10	10	0	13	122
24.10.2022	Co	10	8	2	3	108
	T1	10	9	1	11,5	147
	T2	10	10	0	14	185
30.10.2022	Co	10	8	2	2	70
	T1	10	9	1	7	103
	T2	10	10	0	9,5	112

HARVEST DATA COLLECTION TRIAL PLOTS 2022



Denmark

Mikkel Dalsgaard
Managing Director
Mail: md@rootzone.dk
Tel.: +45 4295 1211

Jørgen Løgstrup
Founder & Owner
Mail: jl@rootzone.dk
Tel.: +45 2384 6511

BACESS A/S & Transform af 1994 ApS

Jægersborgvej 1
DK-9520 Skørping
Denmark
Mail: info@baccess.dk / info@rootzone.dk
Web: www.baccess.dk / www.rootzone.dk

Uganda

Abdul Adeday
Country Director
Mail: adeday@rootzoneafrica.com
Tel.: +256 779 668 046

Biofertilizer Africa Ltd. & Rootzone Africa Ltd.
Ntinda Complex Block C, 2nd Floor, RM F2-09
Plot 32 Ntinda Road, Kampala
Uganda
Mail: inquiries@rootzoneafrica.com
Web: www.rootzoneafrica.com

Kenya

Mariam Njoroge
Mail: mariamunjoroge@gmail.com
Tel.: +254 723 341 220

Bio TransForm Ltd. - Kenya
C/O Kenya Climate Innovation Centre
P.O Box 59857 - 00200 Nairobi
Kenya
Mail: inquiries@rootzoneafrica.com
Web: www.rootzoneafrica.com

1 NO
POVERTY



2 ZERO
HUNGER



6 CLEAN WATER
AND SANITATION



8 DECENT WORK AND
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



15 LIFE
ON LAND



11 SUSTAINABLE CITIES
AND COMMUNITIES



13 CLIMATE
ACTION



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



17 PARTNERSHIPS
FOR THE GOALS

