

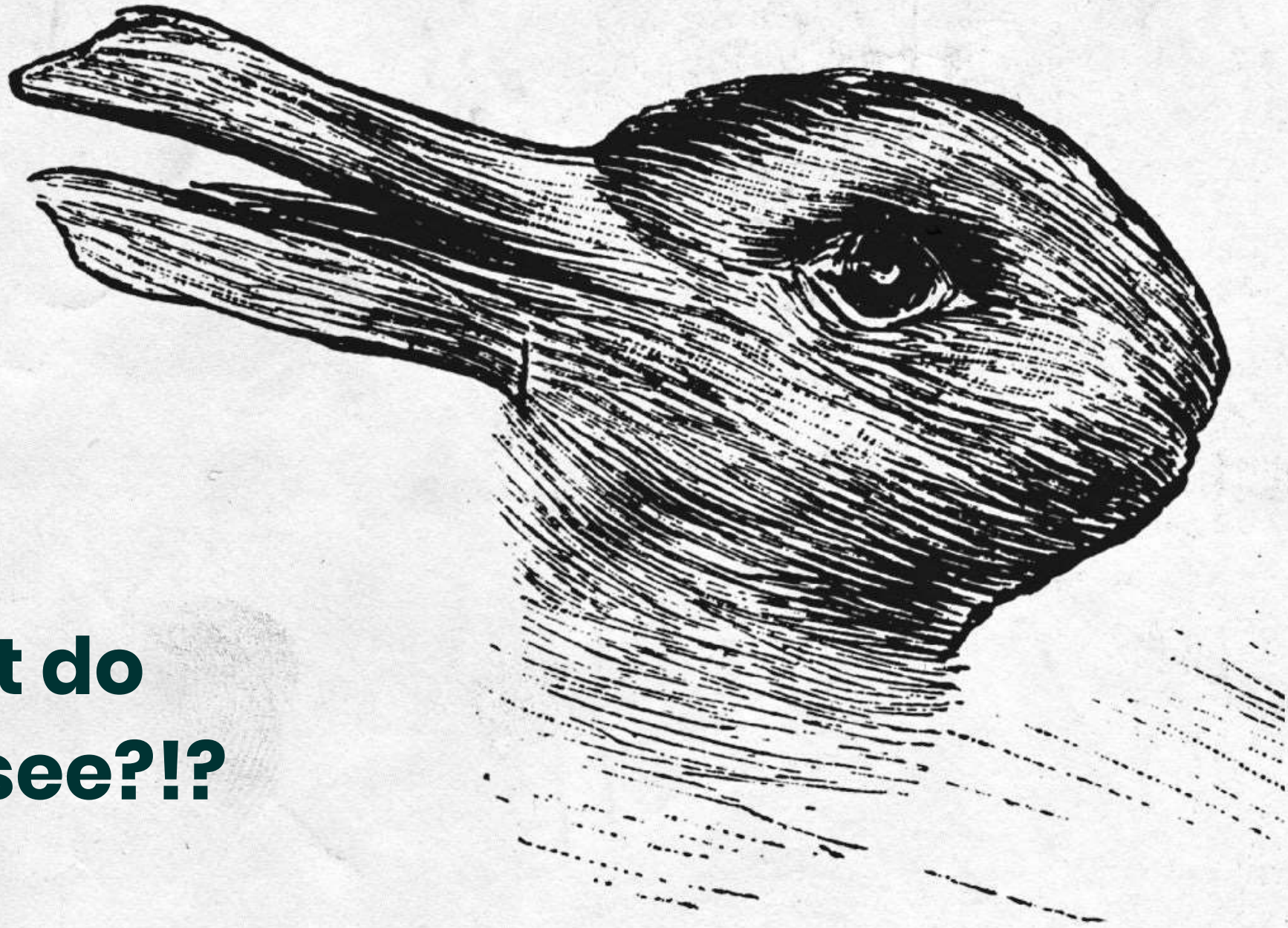


BIOFERTILIZER

Fertilize Your Mind

September 2022



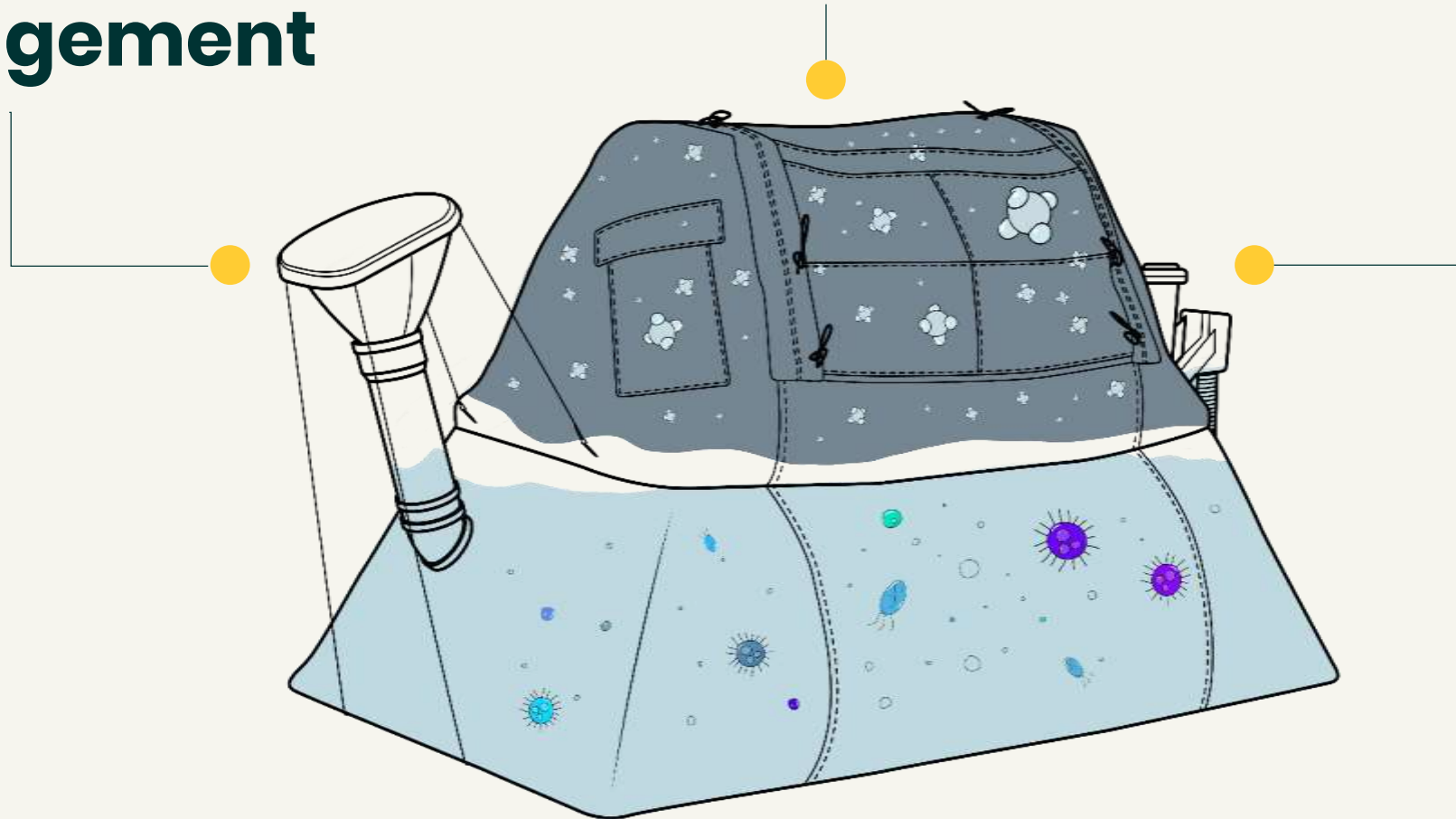


**What do
you see?!?**

Waste Management

Gas

Fertilizer

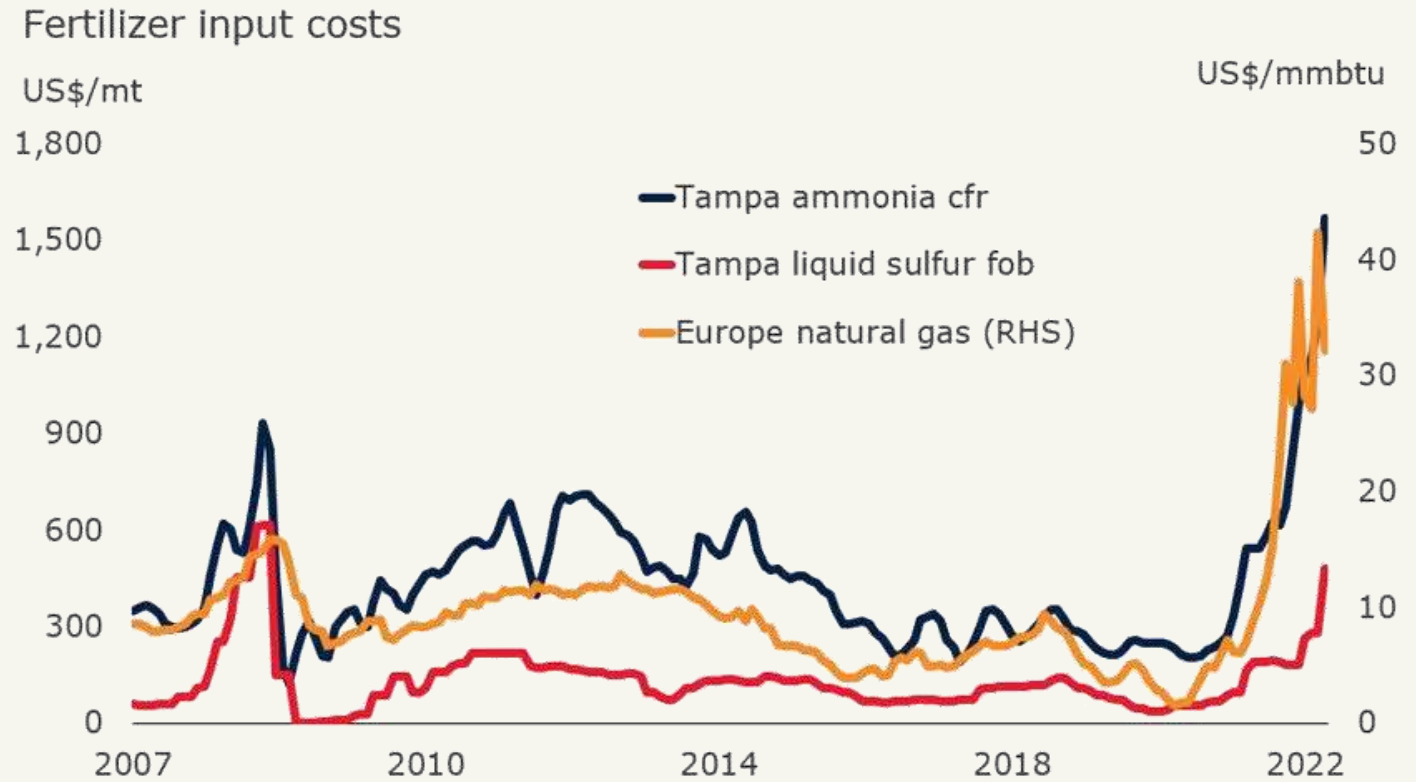




1

THE OPPORTUNITY

Why Now?



Note: Last observation is April 2022.
Source: Bloomberg; World Bank.

THE PRICE OF GLOBAL CHAOS



Natural gas
price surge



Supply chain
challenges



Transportation
costs

A FAST-CHANGING REALITY

WISCONSIN STATE FARMER

News Business Features Editorials Classifieds Legals

NEWS

High fertilizer prices open opportunity for more sustainable ways of growing crops

Kathleen Merrigan, Arizona State University
Published 10:25 a.m. CT June 15, 2022

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The National Corn Growers Association predicts that its members will spend 80% more in 2022 on synthetic fertilizers than they did in 2021. U.S. Department of Agriculture, Public Domain.

Farmers are coping with a fertilizer crisis brought on by soaring fossil fuel prices.

ציוץ →

OpenMarkets @Open_Markets OM

Fertilizer prices could increase by more than 80% for the 2022 planting season according to one study. We spoke with producers about how they are managing the rising costs.



cmegroup.com
Farming Input Costs Are Rising – How Producers are Managing the Risk



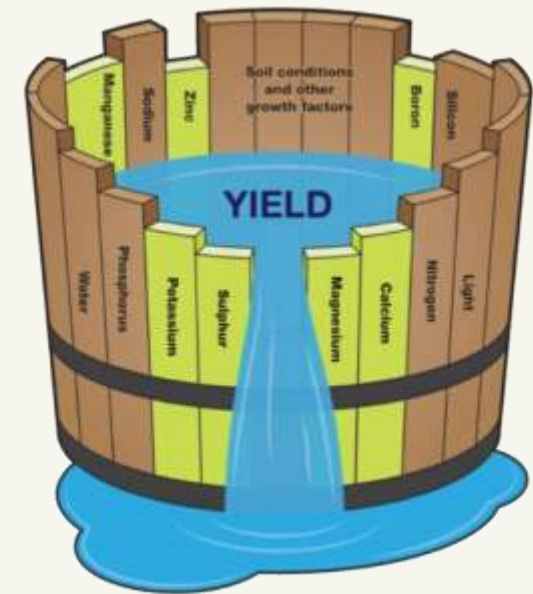
2

THE BIO ADVANTAGE

The Law of Minimum

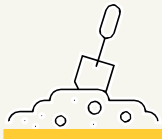
Reaching a plant's full potential

- Biofertilizer contains a wide range of macronutrients, micronutrients, microorganisms, bio-stimulators, and dissolved organic carbon (DOC) that enrich the soil.
- For crops to reach full potential, all macro and micronutrients must be present.
- If **ANY** essential nutrient is deficient, the plant will never reach its full yield potential, even if **All** other nutrients are in abundance.
- Our Biofertilizer provides the additional essential nutrients, which are usually not provided by the farmer.



The Law of the Minimum – the growth of a plant is limited to the least available resource, not to the total resources available to it.

BIO-VALUE FOR THE SOIL & PLANT



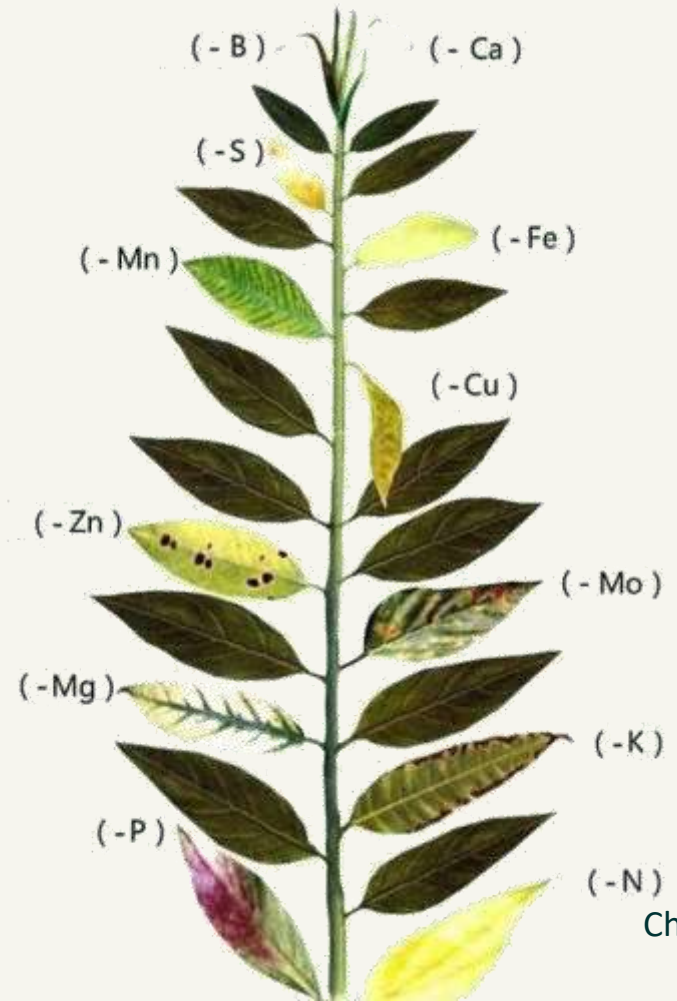
SOIL

- Healthier soil structure
- Humidity retention (soil moisture)
- Nutrient retention
- Healthy bio-flora



PLANT

- Biostimulators
- Better absorption of nutrients
- Stronger root structure
- Healthier and tastier crops
- Increased yield



BIO-VALUE FOR THE FARMER

- **Biofertilizer supplements chemical fertilizers, reducing costs, increasing resilience, and improving output.**
- Less nutrient leaching
- Better chemical nutrient absorption
- Reduces flies, insects, and maggots



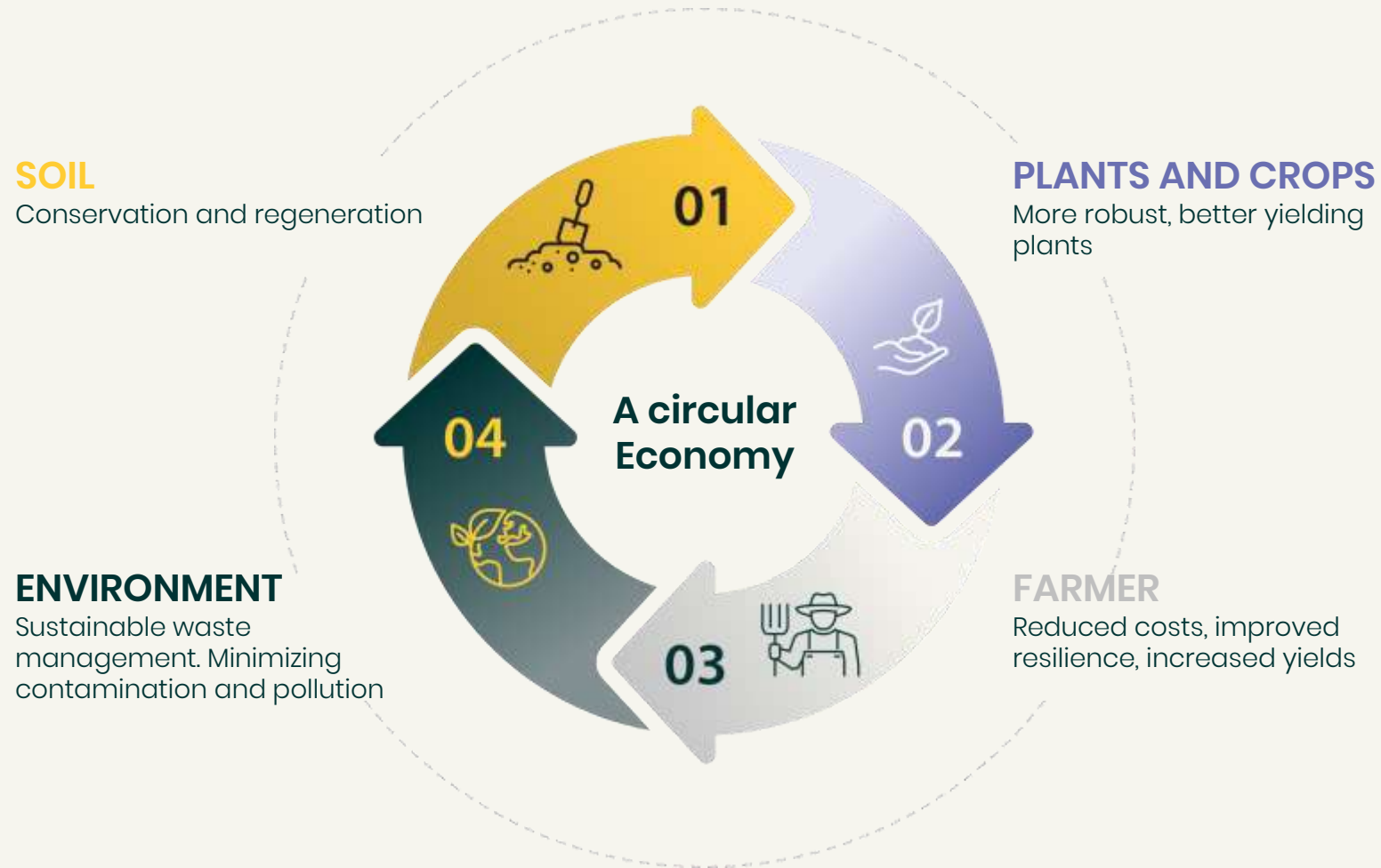
BIO-VALUE FOR THE ENVIRONMENT

Biofertilizer provides a sustainable waste management solution that minimizes contamination and pollution.

- Soil – chemical fertilizer
- Water – leeching of chemicals and manure
- Air – contamination of N₂O and Methane



AN ENDLESS VALUE CHAIN





3

THE SALE

Target Audience

Ideal Client



Spends a minimum \$500 on chemical fertilizer per month

Uses a drip irrigation solution – Daily production of liquid fertilizer can be fed to the plant daily via the drip system



Optimal – A greenhouse grower

Additional Audiences



Organic farmer



Home growers

Main Selling Points – A Simple Story



REDUCE COSTS

Complementary, cost-effective solution to chemical fertilizer



INCREASE YIELD

Improves water and nutrient consumption efficiency for healthier, stronger plants



IMPROVE FERTILIZATION EFFICIENCY

Powerful biostimulator for soil enrichment and better plant growth



EASY INTEGRATION

Integrates easily into existing irrigation systems



DECREASE PESTICIDE AND FUNGICIDE USE

Strengthens crops and soil to resist pest and fungus contamination



ENHANCE FARMER RESILIENCE

Enables independent production of endless free biofertilizer to balance chemical fertilizer cost surge and shortage

Let's look at the numbers – Fast ROI

BIOFERTILIZER

- 20% reduction in chemical fertilizer costs
- Monthly chemical fertilizer cost: 500 USD

100 USD

saved monthly

GAS

- PLG/charcoal replacement
- Monthly expense: 20-25 USD

15 USD

saved monthly

1 HBG System

\$115

saved monthly



\$1380

Annual ROI

*Numbers represent a single system in Mexico

**Calculations are market-specific

*** ROI V Fertilizer calculations can be made through this [link](#)

Better ROI

GIVE THE BIOFERTILIZER A “MACRO PLANT” BOOST!

**Create engagement
with your client and
generate future
sales**

**Increase yield
production**

**Ensure and
increase savings
on chemical
fertilizer**

“Macro Plant”

HomeBiogas Biofertilizer together with “Macro plant” provide a supreme solution for efficient plant nutrition.

“Macro Plant” provides the essential bacteria to fixate and assimilate Nitrogen, Phosphorus and Potassium (NPK). Colonizing microbes in the rhizosphere* area provide optimal conditions to enable uptake of these primary nutrients.



Benefits:

- Supreme solution for plant nutrition
- Macronutrients booster
- Biofertilizer complementary
- Reduce costs of chemical fertilizer
- Improve nutrients absorption
- Increase yields



4 CASE STUDIES



LATAM – Ecuador – Milk Grower

- **Production size:** Increase in 40% food (grass) for the cows
- **Profit:** \$660 more per hectare
- **Money saved yearly on veterinary:** \$40 per cow

*“Good for the pocket, for the animals,
for the environment and for the
pasture!”*

El Colonel



LATAM – Mexico – Tomato Grower

- **Money saved yearly on fertilizer:** \$1200
- **Money saved yearly on gas:** \$100
- **Results:** 30% increase in production, AND... the products are bigger, healthier and tastier

“The system benefited me and my family very much!”

Noe Rico



Asia – Israel – from cucumber

- **Money saved yearly on gas:** \$1200
- **Money saved yearly on fertilizer:** \$1000

The Homebiogas system is very easy to use, and I am very satisfied!”

Edward



LATAM – Ecuador

Producing 150,000 Flowers Every Day

- This product helped the farm conduct sales in Europe, as it addresses the European Union's sustainable agriculture and production standards

“Better flowers, better earth, save money and good for the environment”

Andres Escandon





5

FERTILIZE YOUR MIND

Drill Down



Quantity

Minimal application of biofertilizer: 1L/m² (before dilution)



Nutritional characteristics

Characteristics stay constant if the system is 'fed' similar components. All Biofertilizers have all the micro & macro nutrients plants need – just in different concentrations.



Concentration (vs. chemical fertilizer)

One system produces tens of thousands of liters each year, so quantity compensates for concentration

Abundant Output

TYPE OF SYSTEM/ FEEDING TYPE	FOOD WASTE (FEEDING RATIO 1:1- FOOD WASTE:WATER)	ANIMAL MANURE (FEEDING RATIO 1:2 - ANIMAL MANURE:WATER)	FOOD WASTE AND SLURRY (ANIMAL MANURE AFTER DILUTION)	Yearly production
HBG 2	4 liter of food waste + 4 liters of water= 8 liters/day	16 liters of animal manure + 32 liters of water = 48 liters/day	54 liters/day	17,520 liters/year
HBG 4	12 liter of food waste + 12 liters of water= 24 liters/day	28 liters of animal manure + 56 liters of water = 84 liters/day	96 liters/day	30,660 liters/year
HBG 7	18 liter of food waste + 18 liters of water= 36 liters/day	43 liters of animal manure + 86 liters of water = 129 liters/day	147 liters	47,085 liters/year

Optimal Application



- **Plants grow best when fertilized in higher (daily) intervals rather than once or twice per season**
- A constant supply of biofertilizer can be provided through simple integration of HBG into existing irrigation systems.



- **Ideal absorption method of essential nutrients is from the soil through the roots**
- Biofertilizer can be applied to the soil manually, through the surface, or through drip irrigation, sprinklers, or sprayers.



- **Biofertilizer can also be applied to the surface of the leave to reduce diseases**
- Biofertilizer can be applied to the foliage through sprinklers and sprayers irrigation.

A stronger value proposition

- Direct selling opportunity for farmers –Less dependent on ONG, governments, etc.
- Farmers– huge worldwide potential!
- From homes to business!

From selling biogas for cooking → Biofertilizer is parts of the farmers business agenda. More opportunities!



6 Q&A

You Ask, We Answer...

- **Question:** The NPK value of the HBG biofertilizer isn't good enough.
- **Answer:** The biofertilizer is indeed less concentrated, however, one system produces 47,000 liters of fertilizer a year, so quantity compensates for concentration. Also, as the biofertilizer does not replace but rather complements chemical fertilizers, it should not be evaluated according to NPK percentages, but rather as a stimulator that increases the amount of organic matter in the soil, upgrading quality and yield.

- **Question:** How do I know the quality of the fertilizer? Is the quality consistent? Does it include all necessary micro and macro nutrients?
- **Answer:** General information about biofertilizer quality can be found in the user guide, however, precise analysis of the output of a specifically system can only be verified through laboratory testing.

- **Question:** What is the biofertilizer dilution rate?
- **Answer:** Initial dilution rate is 1:2 (biofertilizer:water). Changes in dilution rate occur over time as biofertilizer nutrients get more concentrated, requiring more dilution

You Ask, We Answer...

- **Question:** Can the fertilizer be stored?
- **Answer:** Yes. Fertilizer can be stored for up to six months, in the shade, using vented caps

- **Question:** Can the fertilizer carry salmonella or other pathogens?
- **Answer:** No! A 30-day anaerobic environment kills both pathogens and plant seeds

- **Question:** Do the hormones in cow manure effect the fertilizer?
- **Answer:** No, the biofertilizer works the same

You Ask, We Answer...

- **Question:** How is this a 3-in-1 solution?
- **Answer:** It is a... 1. biofertilizer, 2. dissolved organic material that can be applied through existing irrigation system, 3. natural pesticide.

- **Question:** Can the fertilizer be integrated into existing irrigation system?
- **Answer:** Yes! Easily!

- **Question:** What happens if I apply too much fertilizer?
- **Answer:** There is no such thing as too much biofertilizer, it enriches the soil with organic matter, so the more the merrier!

You Ask, We Answer...

- **Question:** What is the expected return on investment?
- **Answer:** Expected savings include up to 25% savings on fertilizer and pesticide costs, and the cost of a cooking gas cylinder per month, assuming average gas consumption. In Mexico for example that comes to approximately \$115US per month.

You Ask, We Answer...

- **Question:** What are the standards the products uphold?
- **Answer:** ISO 9001 / 14001 / 23590 and CE.

- **Question:** Where are the products manufactured?
- **Answer:** Production and manufacturing mostly in Israel and QA in Israel

- **Question:** Where are HBG products sold?
- **Answer:** world wide where temperature are above 20 degrees

You Ask, We Answer...

- **Question:** How will the system withstand the harsh environmental conditions of 10 years in the sun?
- **Answer:** HBG products are created using materials that have passed stringent laboratory testing, proving there is no decrease in quality over a period of more than 10 years. Material engineering is based on Israeli technology, incorporating both UV and carbon-based material. Additionally, the triple-layer structure – inner layer for gas containment, outer layer for sun-resistance, and middle layer for reinforcement – ensures durability and longevity.
- **Question:** What happens to the system during cold winter months?
- **Answer:** In cold winter months production of gas is lower, but if the system is fed with animal manure it's ok, a greenhouse can be built around the system, to maintain the minimal required temperature.

Any questions?



Thank you!