
Anvendelsen af ”Modern Biotechnology”
Carsten Hjort, Senior Science Director
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Rethink Tomorrow
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What are enzymes and microorganisms?

Enzymes

Are proteins

Are found in nature

Drive chemical reactions and break down complex structures

Microorganisms

Are living organisms

Have natural properties that influence processes

Are plentiful.
More than 400,000 different microorganisms are already known

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organic
HORIZON ORGANIC
DHA Omega-3


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A global challenge:
Replacing synthetic fertilizers

- Farmers use synthetic fertilizers to meet plant nutrient requirements
- Nitrogen is among the major nutrients
- Industrially produced nitrogen fertilizers are responsible for **1 pct. of total global energy consumption**[1]

[1]International Fertilizer Association (IFA): *Global Sustainability Report, 2019*

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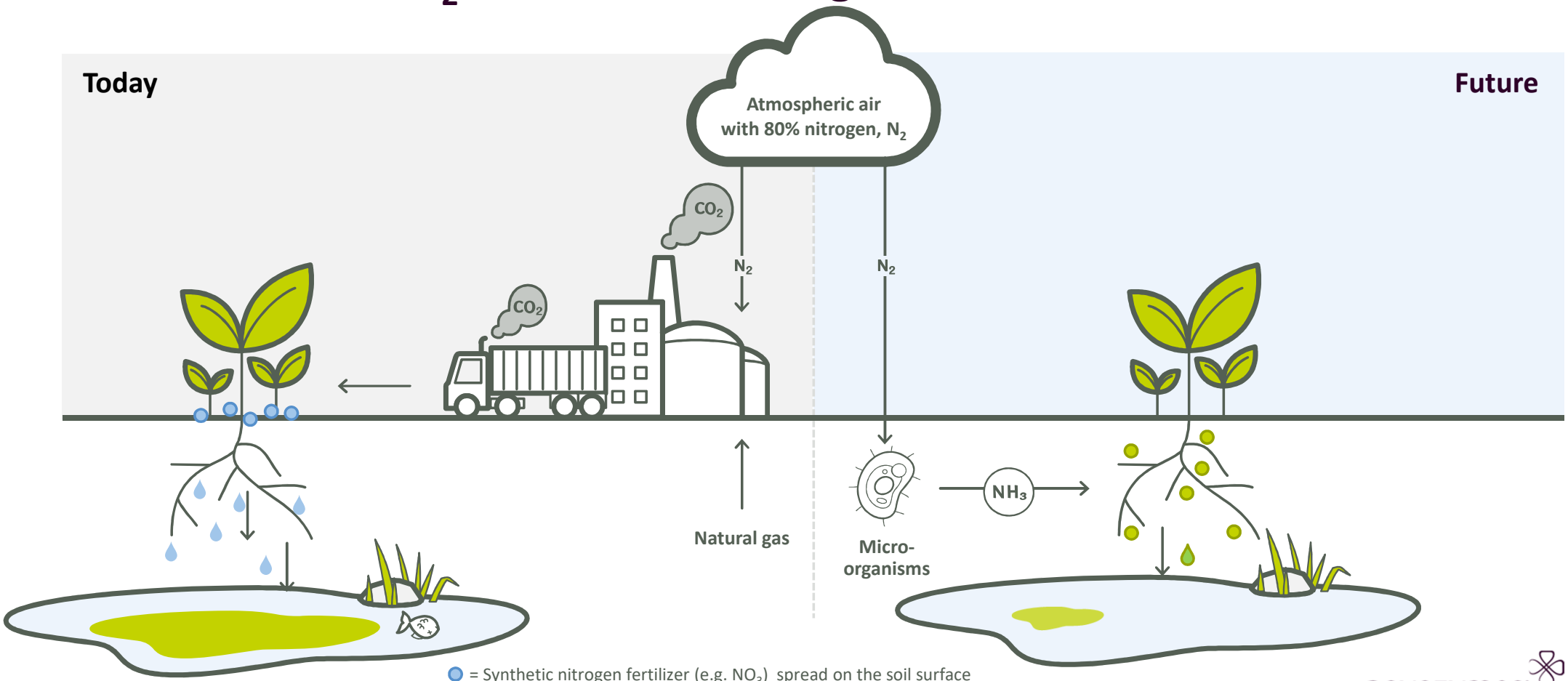
Replacing synthetic fertilizers with microorganisms – could reduce CO_2 emissions from agriculture



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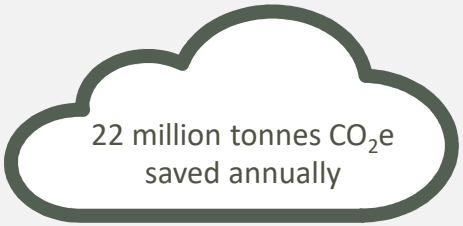
How much greenhouse gases could we save by replacing 50% of synthetic fertilizers?

	USA	Europe	World
Saved CO_2e/year	**13** million tonnes	**22** million tonnes	**139** million tonnes

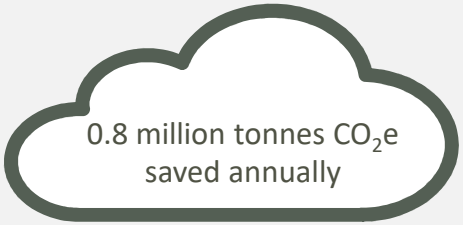
Europe



= **5%** of Europe's total agriculture GHG Emissions ≈

9,000,000 cars off the road

Denmark



= **8 %** of Denmark's total agriculture GHG emissions ≈

300,000 cars off the road

Total emissions from agriculture are based on FAO Stat (2017)
Disclaimer: Study is based on a potential future solution – not on specific performance data

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Benefits of replacing synthetic fertilizers with microorganisms

Reduce agriculture's contribution to climate change considerably

Contributes to global and national climate targets

Reduce net chemical consumption in agriculture

Reducing amount of nitrogen fertilizer that is lost in the environment

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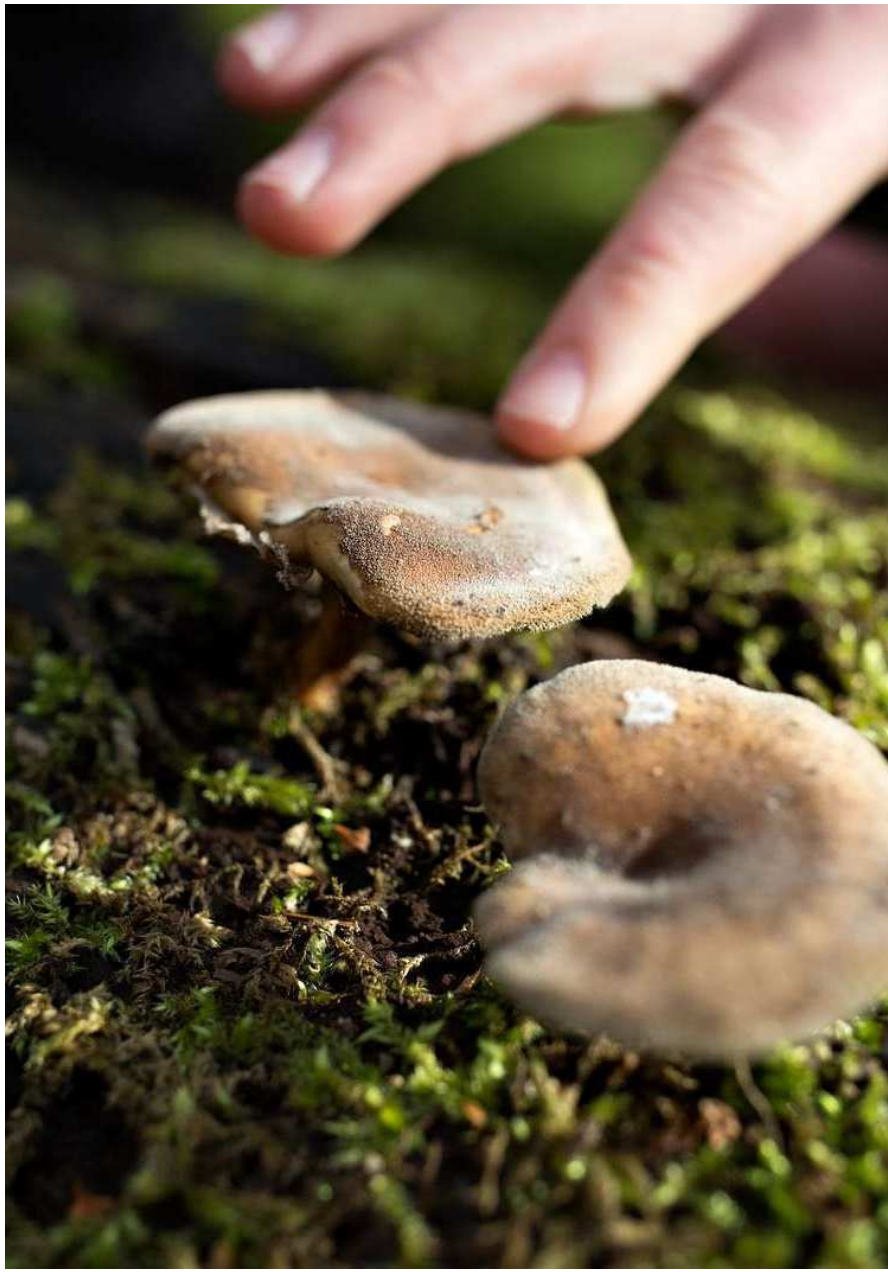
Novozymes foreslår at GMO-direktivet opdateres samtidig med at målet om borger- og miljøbeskyttelse fastholdes

1. Nuværende regulering baseret på 30 år gammel teknologi og er en hindring for nye innovative løsninger i EU.

2. Vi ønsker robust regulering, ikke en deregulering – sikkerhed for mennesker, dyr og miljø er det vigtigste

3. Godkendelsesprocedure bør baseres på produktet fremfor processen

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