Project MicroCHAR® agriCARBON

Key data

Project
Pilot production of biochar from agricultural biomass and its use in subsequent production of patented soil conditioner MicroCHAR®.

Project location
AGRO-B company agricultural biogas station areal, Kardašova Řečice, the Czech Republic.

Readiness level
Basic technological documentation, permits and approvals from local authorities, raw materials for production secured.

CDR (Carbon dioxide Removal)

method	Removal permanence	certification	Certificate type
BCR biochar carbon removal	> 100 year	Puro.earth	CORC

Implementation date
II.Q 24

production and verification start
I.Q 25

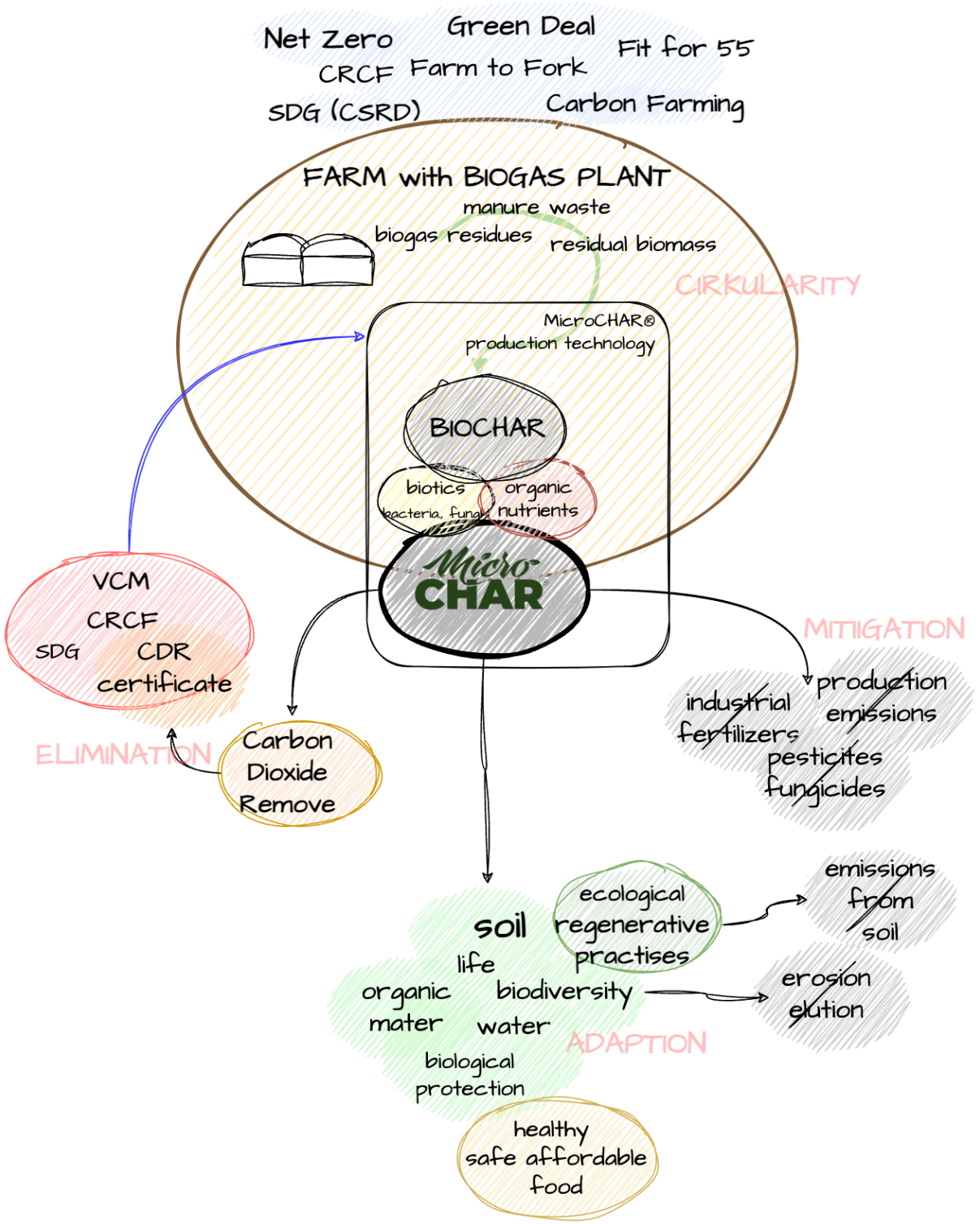
Yearly production capacity
1.000 tons of biochar, 1.500 tons of MicroCHAR®, 3.280 CORC

Certificate delivery timeframe
01-25 až 12-28

CORC pre-sale
10.000 tons CO_2,

MicroCHAR®

- Is a patented soil conditioner, produced from biochar, enriched with organic nutrients, soil bacteria and fungi, able to replace industrial fertilisers and agrochemicals.
- Produced by farmers, near biogas station, utilising fermentation residues and farm waste.
- Regenerates degraded soils, improve soils water management and restores natural fertility of the soil.
- Used in precision agriculture, during sowing.
- Increases the natural c-sink through growth of organic matter of the root systems.
- Contributes to protection of underground water systems from chemical residues from coil cultivation.
- By replacing the industrial fertilisers, MicroCHAR® reduces emissions from their production and usage.
- Permanently removes carbon dioxide from atmosphere fixed in biochar, through certificated method BCR.
- Reduces the costs of growing crops and generates additional income from the sales of CDR certificates, in accordance with the principles of the European CRFC framework.


Net Zero
Green Deal
Fit for 55
CRCF
Farm to Fork
SDG (CSRD)
Carbon Farming
FARM with BIOGAS PLANT
manure waste
biogas residues
residual biomass
CIRKULARITY
MicroCHAR®
production technology
BIOCHAR
biotics
bacteria, fungi
organic
nutrients
MicroCHAR
VCM
CRCF
SDG
CDR
certificate
ELIMINATION
Carbon
Dioxide
Remove
MITIIGATION
production
emissions
industrial
fertilizers
pesticites
fungicides
soil
life
organic
mater
biodiversity
water
biological
protection
ecological
regenerative
practises
emissions
from
soil
erosion
elution
ADAPTION
healthy
safe affordable
food

MicroCHAR® as a system solution offers farmers a tool to effectively transit to sustainable and organic farming in accordance with the Carbon Farming principles, and independence on industrial fertilizers and agrochemicals.
Farmers benefit from lower fertilizer costs and from additional payments for organic quality produce, and also from the sale of CDR certificates on voluntary markets, which will soon become part of the European carbon removal market under the CRFC framework.
MicroCHAR® brings innovative elements to agribusiness and brings back principles of common sense in farming.

Additionality is fulfilled during the production of biochar from fermentation residues, which prevents re-oxidation of biomass and therefore permanently removing (biogenic) carbon dioxide absorbed in biomass.
Financial additionality is supported by the necessity to obtain an additional support from selling CORC certificates, without it, the project would be economically unfeasible. At the same time, a BCR project with proven positive impacts and quality of certificates cannot be ruled out when similar projects are accepted. The reason for exclusion would have to be demonstrated.

Project MicroCHAR® in Kardašova Řečice uses the value of credits to cover the initial investment cost and operational costs of production of carbon-based soil conditioner, which ensures an acceptable production cost for farmer, respectively, lower compared to use of industrial fertilizers. This creates a financial incentive to change from conventional to organic farming. Without this incentive, this conversion would probably not have taken place and therefore the degraded land would not have been regenerated.

Pilot and demonstration facility is going to be in the Czech Republic near biogas plant owned by agricultural holding AGRO-B in Kardašova Řečice. Its production capacity is 1.000 tons of biochar per year, representing 3.280 tons of carbon dioxide removed with a persistence time of 100+ years.
Biochar is produced from fermentation residues from biogas plant and wood chips from wood processing. Renewable electricity and heat from the biogas are used for the production. Organic nutrients come from poultry droppings from controlled farms. Bacteria and fungi are supplied by reputable producers with a quality guarantee. The yearly production of MicroCHAR® will be 1.500 tons.
The proven KARBOTECH 500 technology, designed as an internal push reactor with indirect flue gas heating, will be used for biochar production. The pyrolysis gas is cleaned and cooled prior to combustion, making the combustion virtually emission-free.

The planned plant has been assessed for BCR certification according to the Puro Standard and is ready to issue CORC certificates.
In addition to MicroCHAR® production, the plant at Kardašova Řečice will act as a showcase plant for the sale of the licenses to farms.

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