

# Coop Support Programme: Manure and slurry make energy and fertilizer



The climate protection programme promotes the construction of small-scale biogas plants like the one at this farm belonging to organic farmer Andreas Ballif in the Bernese Jura. Foto: Andreas Ballif

**The Coop climate protection programme supports agricultural Bio Suisse or Miini Region businesses in the construction and operation of small-scale biogas plants. The biogas plants make it possible to ferment accruing farm waste such as manure and slurry so that energy and heat can be generated in a cogeneration plant. This helps to avoid methane emissions which otherwise occur in the storage and processing of farm manure, and produces renewable energy at the same time. Anyone who is interested can register for this climate protection programme now.**

These days the majority of farm manure is traditionally stored on dung heaps or in slurry pits. Bacterial metabolic processes involved in the decomposition of the organic material result in the formation of methane, a greenhouse gas that is 25 times stronger than CO<sub>2</sub>. These emissions contribute to global warming.

Through targeted fermentation within a biogas plant, the farm manure is converted into biogas and organic fertilizer (fermentation slurry) by means of microorganisms under anaerobic (oxygen-free) conditions. Subsequent combustion in the downstream cogeneration plant converts the harmful methane gas into CO<sub>2</sub> along with heat and power. The organic origins of the carbon mean the resulting CO<sub>2</sub> is climate-neutral. The energy produced is fed into the grid, while the heat is used in the fermentation process and for heating nearby buildings. The remaining fermentation slurry is high in nutrients and is therefore perfect for use as a fertilizer.

Most biogas plants use not only farm manure, but also other, energy-rich organic waste (co-substrates), which provide more biogas and thus enable the plant to operate more economically. These substrates are becoming ever rarer and can be controversial depending on their origin. The agricultural small biogas plants in this climate protection programme have to use at least 80 percent farm manure and no more than 20 percent co-substrates.

## Project type:

Biogas

## Project location:

Switzerland

## Project status:

In operation, exclusive

## Annual CO<sub>2</sub> reduction:

1,000 t (over 10 years)

## Situation without project

Storage of the accruing farm manure on dung heaps and in slurry pits.

## Project standard

VER

## Partner



## Impressions

Due to the low biogas yield, it takes quite a long time to recoup any investment in these sorts of plants. The enterprise allowance from the Coop climate protection programme aims to reduce the obstacle of high initial investment costs for interested farmers. The level of the one-off amount is calculated based on the expected reduction in greenhouse gas emissions and stands at CHF 100.- per tonne of CO<sub>2</sub>.


## Contact

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*Note: This programme does not accept any more applications. The Support Programme for agroforestry is still open for new applications.*

This project contributes to 3 SDGs:


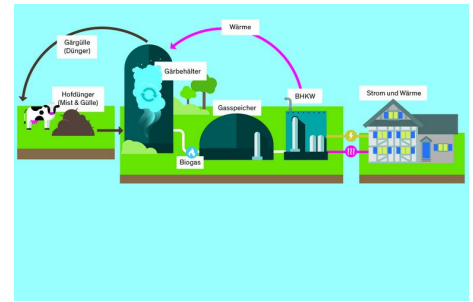
**7 AFFORDABLE AND CLEAN ENERGY** 145 MWh of electricity are generated annually.



**12 RESPONSIBLE CONSUMPTION AND PRODUCTION** Use of liquid manure and dung as biogas.



**13 CLIMATE ACTION** Around 100 t of CO<sub>2</sub> are saved annually.

Slurry and manure are fermented in the fermentation container to produce biogas and fermentation slurry, which is used to produce energy, heat and a nutrient-rich fertilizer.



In the plant concept designed by Niklaus Hari (right), the biogas is stored in a gas store that takes the form of a balloon (seen in the background). On the left in the picture is farmer Andreas Ballif. Foto: myclimate



During the course of construction of his new piglet shed, Andreas Ballif has a biogas plant installed at the same time. Foto: Franziska Lustenberger



After fermentation, nutrient-rich fermentation slurry is held in the final repository and later applied to fields as fertilizer. Foto: myclimate