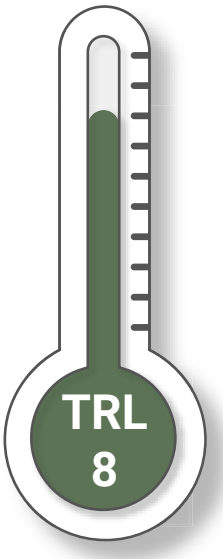
GO-GRASS

10 PRACTICE ABSTRACT

Local, heat treated, quality assured reed canary grass animal bedding

Technology readiness level:



Target group

Customers are owners of stables, farms and animals such as horses, cattle, cows, pigs and poultry, schools of agriculture, greenhouses, soil producers and also some small pet keepers. Companies with greenhouses and production of soil are more and more interested in the material since they look for alternatives to peat. Tests have shown that reed canary grass can replace and decrease the use of peat and therefore benefit climate.

Benefits and impact

The cultivation of reed canary grass can contribute to achieving environmental and climate goals since this energy efficient crop harvested dry in springtime, can supply ecosystem services, store carbon in the big root system and thereby create carbon sinks. The processed bedding material mixed with manure will raise the value of the manure and increase circularity. In particular, horse manure is often not used due to the high content of wooden material which consumes nitrogen when decomposing. The use of Klimatströ to replace peat for climate reasons will involve new stakeholders such as greenhouses and soil producers. Also benefits such as new jobs, local self-support, strengthened preparedness at crisis and local economy are important.

PRACTICE ABSTRACT

Reed canary grass animal bedding

Description

A whole value chain suitable for small scale farm production has been developed. Reed canary grass is processed to a heat treated, quality secured and compressed product, suitable for multiple use for the local customers both as bedding material, peat substitution in soil, and as biofuel. The key equipment in the process is a screw press, a briquetting machine adapted for straw which is complemented with technique for shredding, dedusting, packaging, guidance and supervision. The product called “Klimatströ” in Sweden works well in stables and barns, and it can be ordered directly from the producer. Information about the product is available at **this Swedish website**.

Watch the demosite video

Challenges

In Sweden large volumes of wood shavings and sawdust are used as animal bedding in stables and barns, which worsen the value of the manure and obstruct circularity. Wood shavings are less degradable, so they are a problem for digesting manure obtained from farms. The main pains at Swedish countryside are closure of farms due to unprofitability, lack of generation shifts (younger farmers and entrepreneurs), lack of local produced bedding material and abandoned arable land.

Solution

By replacing the wood materials with straw or reed canary grass in the form of shredded briquettes, there is a range of benefits, both for animal welfare, animal-keepers saving time and climate regarding carbon capture and recirculation of nutrients. The cultivation of reed canary grass and processing this grass into bedding material can create new incomes and add value to farms, ecosystem, countryside and municipalities. Reed canary grass bedding mixed with manure will result in higher efficiency in the biogas process, as fertiliser and contribute to increase circularity. The shredded straw briquette is easy to handle, it saves time and provides a soft, stable and dust free bed for animals like horses, pigs, poultry and cattle. It is heat treated which eliminates bacteria and mould spores, is delivered compressed and requires little storage space, and it benefits the nutrient supply, carbon capture and humus content in the field. Reed canary grass enables the use of abandoned land in combination with carbon sequestration. Continual efforts of cost reducing activities together with adapted marketing, sales and distribution will make the production profitable.

Team and contact

RISE Research Institutes of Sweden

Susanne Paulrud
susanne.paulrud@ri.se

Cecilia Wahlberg Roslund
cecilia@cewaro.se

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N°862674

GO-GRASS