

Technical efficiency



Animal welfare



Background

Interest in using recycled manure solids (RMS) as bedding material has increased in recent years. Potential advantages include increased cow comfort, reduced costs and increased environmental sustainability compared with other bedding materials.

How does the strategy work?

RMS is made by mechanical solid-liquid separation of the slurry. The slurry is pumped to the screw press which separates slurry solids from the liquid fraction.



Photo: Lilli Frondelius, Luke



Photo: Mira Haapalainen, Luke

The screw press is situated near the barn, under roof and high enough to let the solid fraction drop down to the distribution wagon. It is practical that RMS is pressed directly to the wagon with which it is distributed to the cubicles.

RMS is spread to cubicles immediately after pressing, thin layer at a time. Thin layer lets the freshly pressed RMS to dry more.



Photo: Mira Haapalainen, Luke

Equipment involved and investment

- Separator
- Pipes
- Mixer
- Distribution wagon /system
- Total system installation costs approximately €25,000 – €35,000, depending on the equipment needed

Positive features

- Economical
- Produced at own farm
- Renewable
- Soft for cows to rest
- Better than sand for skin lesions
- Better for the slurry system than sand

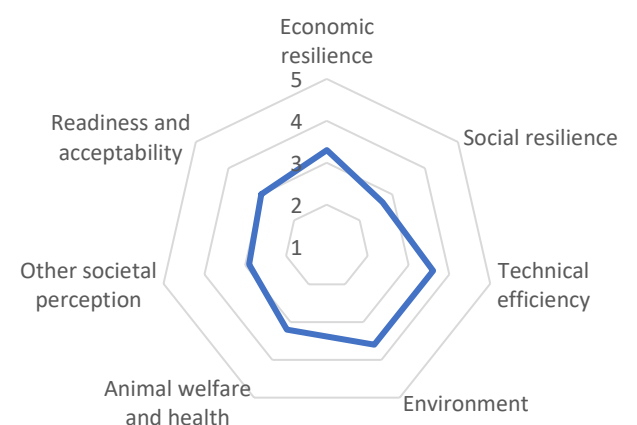
Be careful, especially on these points

- Use RMS soon after separation.
- Do not store it because it will easily decompose aerobically and warm up, promoting microbial growth.
- RMS should have a target dry matter content of 35%. There is a risk of microbial growth if RMS is too wet while too dry RMS increases dust formation.
- When using RMS the conditions of the barn should not be too warm and humid to prevent microbial growth.

Specific advises

- Remove wet and used RMS frequently from the beds.
- Use only RMS produced from slurry at the own farm.
- Monitor actively cow health and welfare.

Assessment of method



Quote of the farmer:

"Using RMS takes more effort from us but it is surely better for cows."