



Sm@ll Ruminant Technologies

Hay drying technology for goats

Need:

Hay making traditionally depends on suitable weather. To get quality hay with high protein and energy content the grass should be at the right growth stage. However, quite often rain in this period makes it impossible to make hay at the correct growth stage. Additionally many dairy goat and sheep farmers prefer to feed their animals with hay diets (not silage) to reduce the exposure of Clostridial bacteria from silage into milk and to achieve high quality cheeses with a longer maturing time.

Aim:

To optimise the time of hay cutting at the ideal growth stage regardless of the weather conditions. To ensure consistent high quality grass-based forage for dairy goats throughout the year.

Description:

After the cut, the grass is allowed to wilt for one day (or less) on the field and is then transferred to bunkers. Drying system has various sensors for monitoring air temperature and humidity at different heights of the bunker during the post drying process. The system moves valves as needed. The system uses either warm dry air from attic room or switches on the dryer for removing excess moisture from the air. This is powered by electricity mainly sourced from solar panels. The barn has double ceiling under black tin roof. The sun heats black roof, the air is heated and directed through tunnels to the bunkers. The dried hay is delivered by a suspended forklift on overhead rails.

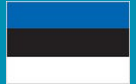
How to Implement:

The implementation of this technology is described in a section Description.



Country:

Estonia



Production System (dairy or/and meat sheep/goat):

Dairy goat, dairy sheep

Category of Animal (ewe, goat, replacement, lamb, kid):

Lactating, dry and young goats/ewes and bucks/rams. The whole flock.

Source of Information:

Attachment/Links:

<https://www.youtube.com/watch?v=RwV-R2AQBMU>

Expected Benefits:

Labour demands for the delivery and management of feed is reduced. The period of time taken for the whole process of hay-making is shortened, from cutting to storage, it can be completed in one/two days irrespective of the weather. As the post-cut hay spends little time lying on the ground (the drying process takes place indoors), there is less risk of contamination of the hay from soil and atmospheric microbes. In addition the nutritional quality parameters (including protein and energy) of the hay are higher and there is less need for concentrate feed. The consistent quality of the hay is expected to improve palatability and feed intakes. One person can manage the feeding and milking of 500 milking goats.



Costs and Challenges:

- Set up costs ~ > 15, 000 Euro
- Subscription required: No
- Availability of necessary space and suitability of housing to fit requirements. Availability and unpredictable costs of energy required to ventilate the drying bunkers and costs for bunkers.
- Ease of use? Scale 1 (Complicated) – 10 (Simple)



Maybe

- Recommend this tool/technology for use on other types of farm? Yes



This tech works for me because it allows to make a quality hay fast and in expected time

FARMER FROM ESTONIA



It would take xx years for xx adoption.



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