

Slurry tank equipped with a drag hose unit on grasslands.

Renata Matysiak, Puszczykówek

Wielkopolskie Voivodship



- **Background**

Renata Matysiak runs her family dairy farm together with her husband and two sons. Farm is purely specialized in production of milk. At the moment there are 240 milking cows with average milk yield of 10 500 liters per year. Farm is still growing and being modernized. Farm has to provide income for three families as Renata's sons has already set up their own. In recent years farmers has invested a lot in a new and modern technologies and machines and are continuously increasing number of cows. For some years they have reached level of 11 500 liters of annual milk yield. In recent month they have also decide to move into milk production from non GMO feeds. All these developments costs a lot of many and as farmers underline milk price is not sufficient and satisfactory taking into account their efforts and money invested. In such economic conditions it is very important to optimize all processes of milk production on a farm. As we can see from a farm structure permanent grassland area constitutes very important part of animal diet on this farm. Hence it is crucial to get the best possible production of grass in a sense of both quality and quantity. It is also important that grassland is located 16 km from a farm and there are no easy options to buy agricultural land closer to the farm. The other issue is quite large animal

production on a farm providing large amount of manure to be used as a fertilizer. All these factors resulted in innovation described in next section.

- **Detailed description**

Innovations is based on a piece of equipment which is slurry tank equipped with a drag hose unit. This particular equipment has been carefully selected based on a following factors:

- objective and need of farmers to reduce costs of production
- getting most production of high quality grassland
- volume of manure production on a farm
- distance to grassland
- environment restrictions
- social issues related to bed smell and negative people reactions to this problem

Before concrete equipment was selected farmers tested different machines provided by machine dealers. Finally a slurry tank equipped with a drag hose unit was selected as the best option.

Results

The main reason was that manure is not spread over the grass but goes directly into ground. Very often, especially with a hot weather, direct spreading of manure on a young grass was burning it. Using drag hose has completely eliminated this problem. Farmers are using this equipment 3-4 days after cutting grass which gives a very strong kick for a new grass to grow. The production of grass has improved by about 20% after applying new technology. New tank is big enough to manage manure management on a quite large area of permanent grassland located 16 km from a farm. The social problem of a bed smell has been also eliminated as manure goes into ground. Having more grass of better quality resulted in a costs reduction. At the moment cows give around 25 litres of milk from forage. It is crucial for farm economics as farmers have decided to go into non GMO feed which means higher costs of concentrates.

Adoption criteria

Innovation applied by Matysiak Farm can be easily adopted by other farmers, especially ones who have significant amount of grassland used in their animal diet and a large amount of manure to be spread and used as a fertilizer. It is however always recommended to consider different options and make field test before a farmer choose a specific piece of equipment. Farm machines are very expensive and it is also highly recommended to share these costs among a group of farmers. Matysiak family was trying to organize such group for their slurry tank but mentality of polish farmers does not help such ideas.

Matysiak case shows that with very tiny margin in dairy production and very high costs of investments it is crucial to take care of all details and process and go towards what we call precise agriculture.

Future prospects

Farmer for the time being is satisfied with results he has obtained from his innovation regarding optimal management of his grassland and manure management.

Presently Matysiak family is considering how to solve the other issues on a farm which is too small milking system (2*5) regarding the number of cows on the farm and small area of cow sheds. They consider investement into new cow shed and milking robots.