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Good economics of feeding with fodder beets

A new method in which fodder beets are ensiled with whole maize grain means that beets can be used as forage all year round. Model calculations show earnings of approx. DKK 700 per cow-year at a grain price of DKK 140/hkg, when the grain in the forage ration is replaced with beets. With grain prices of DKK 200/hkg, earnings could be approx. DKK 1300 per cow-year.

Rising grain prices make it worthwhile feeding high-yielding dairy cows with beets. There are two ways of feeding with beets.

- A new method in which the fodder beets are co-ensiled with silage maize makes it possible to feed with beets all year round.
- Traditional storage of fodder beets, which due to large storage losses in the summer period limits the use of fodder beets to five to seven months per year.

Watch out for selective feeding from the feed bunk

If beets are to be used for co-ensiling with silage maize, it is recommended that the beet root is crushed so most pieces have a diameter of 5-10 cm. Further size reduction, where the beets are cut into small pieces or mashed will increase the risk of juice run-off.

When feeding with mixed products, cows will often eat the pieces of beet first. There should therefore be one space per cow at the feed bunk. Several feed deliveries a day will reduce the problem of selective feeding, but there is still a risk that some cows will determinedly go for their preferred beets, with ensuing risk of ruminal acidosis or severe increase in weight gain if space is limited at the feed bunk.

(Photos from web!)



Co-ensiled fodder beets and maize 10-11 months after ensilage. The beet pieces must contain their juices like pickled cucumbers in order to avoid juice run-off.

Photo: Karsten Jensen, Heden og Fjorden, who has helped to develop the system.

Best economy with co-silage

Co-ensilage of beets and maize has the advantage that the costs of ensiling the beets can be held at a relatively low level, as both harvesting and silage making are performed in a single process. Feed delivery costs are also reduced compared to the use of fresh beets, and ensilage allows beets to be fed all year round.

The proportion of root + top vs. maize is typically around one third root + top to two thirds whole crop maize.

Table 1 shows that there is money to be earned by feeding with beets, especially when co-ensiled with maize. At a grain price of DKK 140/hkg, earnings could be DKK 700, while the difference is as much as DKK 1300 at a grain price of DKK 200/hkg.

Table 1: Difference (increased earnings) compared to a system based on grass and maize silage supplemented with rolled barley.

	At grain price of DKK 140/hkg	At grain price of DKK 200/hkg
Co-ensilage of fodder beets + top and whole crop maize	700	1,300
Traditional storage and feeding with fodder beets in autumn and winter	300	600

Conclusion

The economic benefit of co-ensiling maize and fodder beets with and without top can be ascribed to the following:

- Fodder beets have a significantly higher potential yield than grain.
- Fodder beets can partially replace expensive grain in the feed ration.
- Co-ensiled beets can be fed throughout the year.
- Feed delivery costs are relatively low, as delivery can be carried out within an existing silage system.

The economic benefit of feeding with beets decreases with lower grain prices and increases with higher grain prices. The financial benefit is more or less the same regardless of soil type, providing the relative yield of grain and fodder beets remains the same.

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