Quality of grass silages wilted as swathed or wide-spread crop

Anne Kjersti Bakken, Astrid Johansen, Olav Martin Synnes
1Norwegian Institute for Agricultural and Environmental Research
2The Norwegian Agricultural Extension Service, Sunnmøre

Introduction
In the humid climate at the Atlantic coast of Norway, it is a challenge to produce wilted silages. To speed up the drying rate, it may be worthwhile to invest in machinery for wide-spread and later windrowing of the crop before baling. This study investigated cost-benefits that might be related to such an investment.

Methods
In a series of experiments in first and second cuts along the Western coast of Norway, previously swathed or wide-spread and windrowed crops were baled simultaneously with six layers of plastic after about 24 hours of wilting.

Results and conclusions
By wide-spread as compared to traditional swathing, it was possible to wilt a mildly conditioned grass crop to a DM content acceptable for baling (ca 28 % DM) within 6-8 hours after mowing.

By avoiding the extra night and day of wilting needed for swathed crops, the risks for rewetting and unfavourable conditions during harvest are considerably diminished in a region with rainfall on two out of three days in the harvesting period.

The significantly higher frequencies (P<0.05) of silage samples with Clostridiae and butyric acid from wide-spread than from swathed crop, may be of concern for those planning an investment in machinery for wide-spread and windrowing. There are, however, no reports on increased incidences of spores in milk from farms where silages are wilted wide-spread as compared to swathed.

Wide-spread and rapid wilting may improve the nutritional quality of the silage, both through the higher DM contents achieved per se and because a higher proportion of the water soluble carbohydrates (WSC) in the crop is conserved during wilting and silage fermentation.