



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

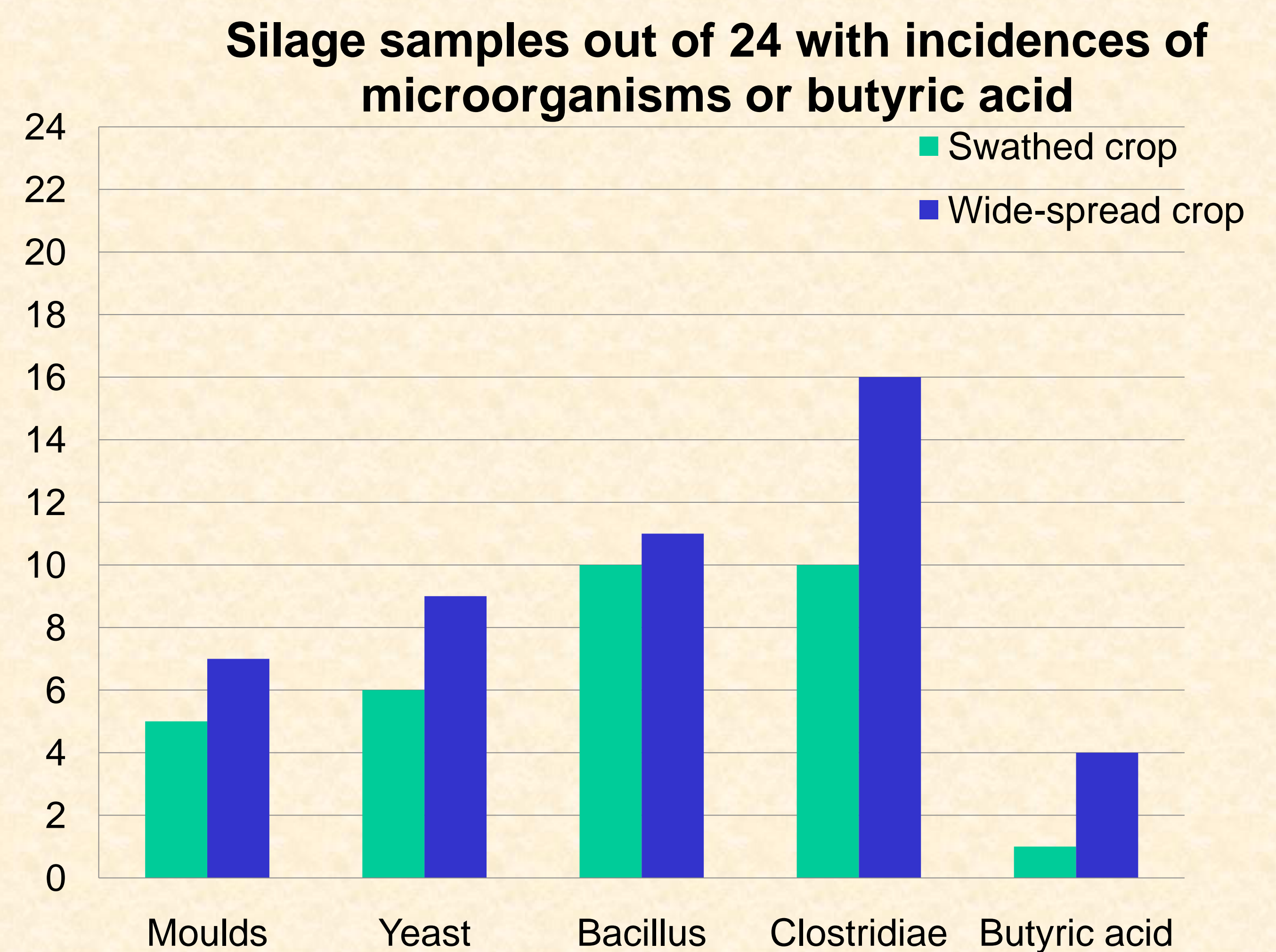
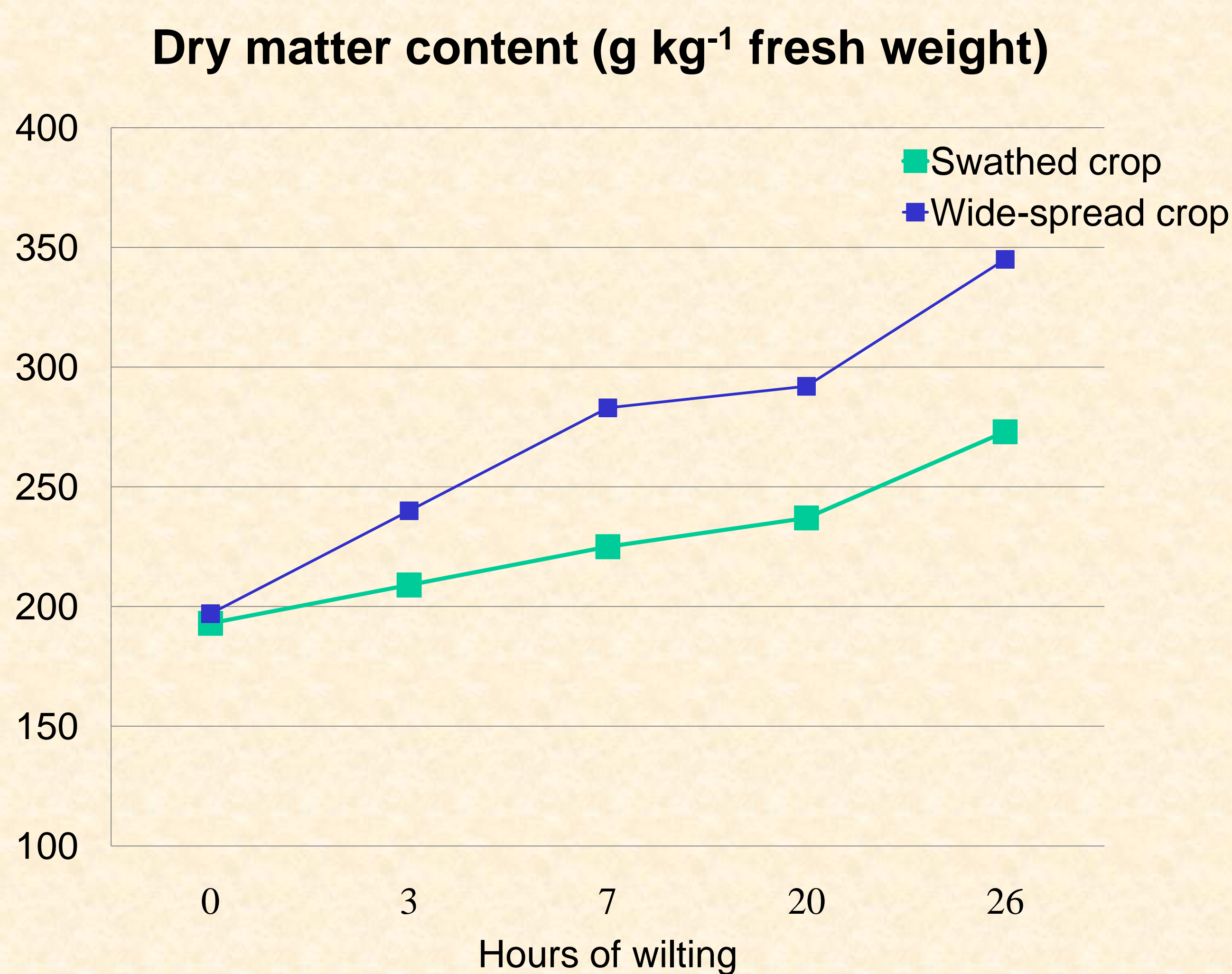
¹Anne Kjersti Bakken, ¹Astrid Johansen, ²Olav Martin Synnes
¹Norwegian Institute for Agricultural and Environmental Research
²The Norwegian Agricultural Extension Service, Sunnmøre

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-spreading 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.



Composition of silages

Wilting treatment	DM g kg ⁻¹ fresh weight	pH	WSC g kg ⁻¹ DM	Sum acids g kg ⁻¹ DM	NH ₃ -N g kg ⁻¹ N
Swathed crop	259*	4.25*	51*	91*	84*
Wide-spread crop	325	4.41	62	75	73

* significant ($P < 0.05$) differences between treatments

Results and conclusions

By wide-spreading 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 *Clostridia* and butyric acid from wide-spread than from swathed crop, may be of concern for those planning an investment in machinery for wide-spreading 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-spreading 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.