The effect of climate, clover species and swath management on pre-wilting of a mixture of grass and clover

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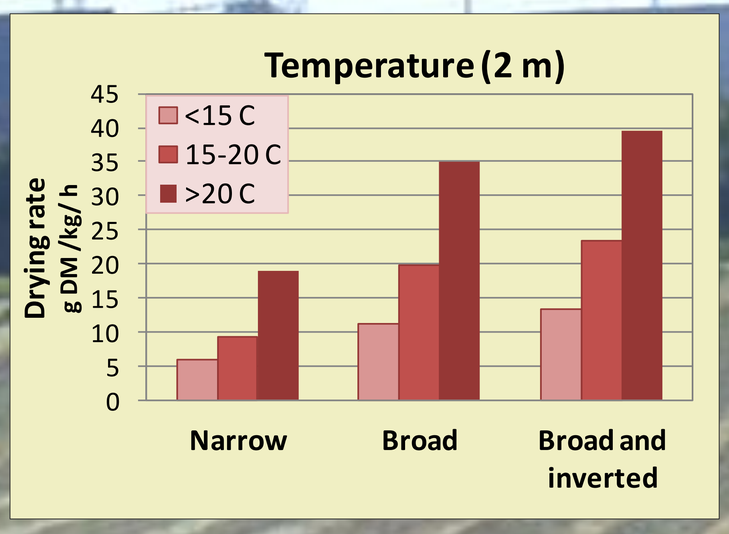
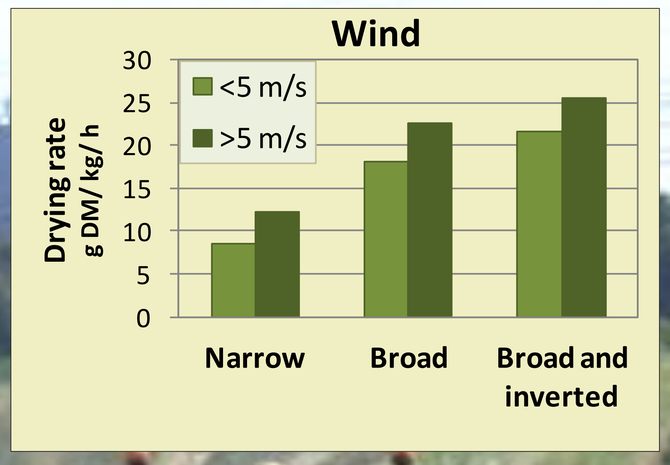
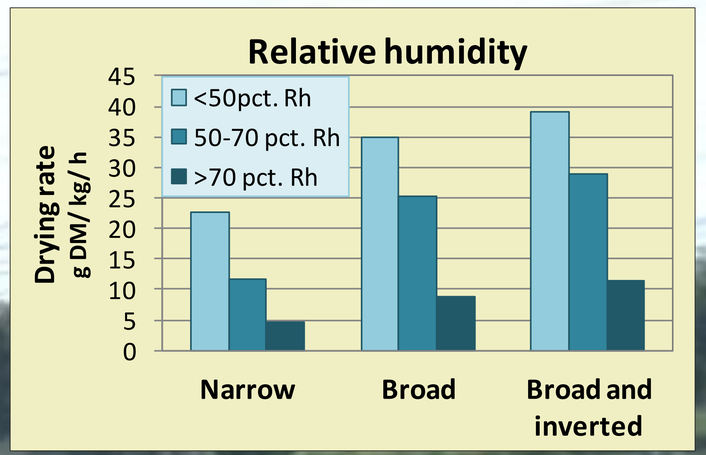
Introduction
With the aim of developing a climate-dependent pre-wilting prognosis data of drying rates were collected under different conditions over two years

Methods
24 occasions during 2008 and 2009 growing season:
White clover/grass and red clover/grass were harvested at 10 a.m.
Samples of the swath at 10 am, 1 pm, 3 m, 8 pm – 10 am and 3 pm next day
Swath treatment: 1) narrow, 2) broad and 3) broad and inverted at 1pm
Climate data app. 200 m from the research area

Results – effect of climate during daytime (10 am-8 pm) and the effect of clover species on the drying rate

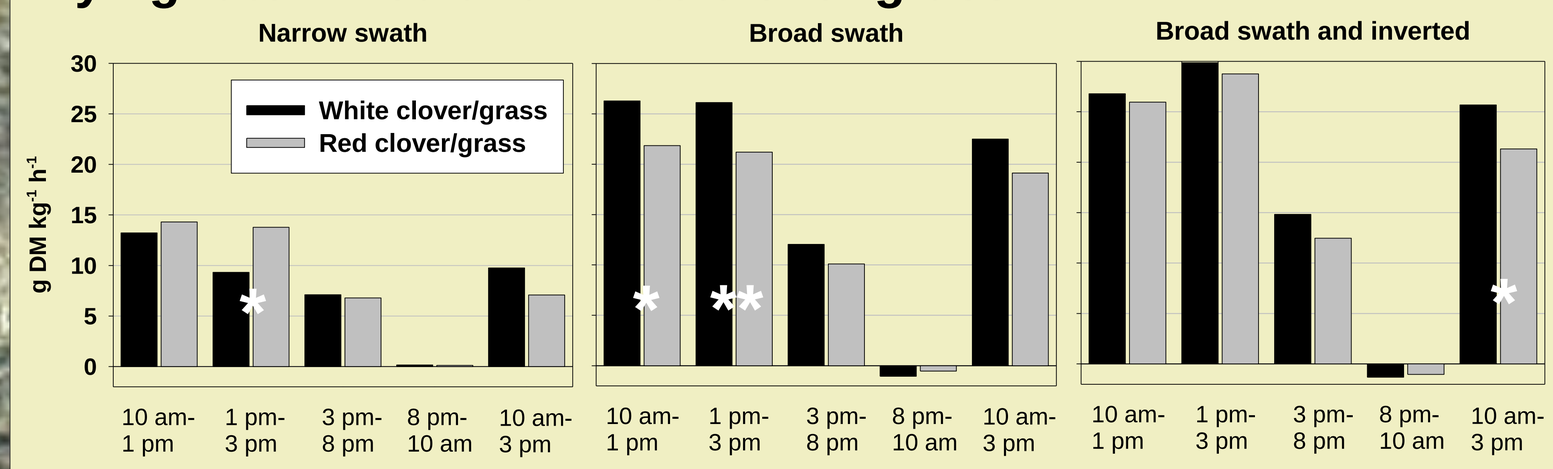






Drying rate highly increased with temperature, global radiation, wind speed and decreased with relative humidity. The swath type highly influenced the size of the climate effect

Drying rate in red and white clover grass



In broad swath mixtures with red clover had a lower drying rate than mixtures with white clover. In narrow swath the opposite was the case. During the night the dry matter content on average decreased a little on broad swaths.

Regression coefficients for drying rates in broad swath:

Intercept	37.3
Yield (t DM/ha)	-8.0
Temp. (^{o}C at 2m)	1.2
Rel. humidity (%)	-0.40
Global radiat. (MJ/m^2)	0.03
Wind (m/s)	0.26
Precipitation	-10.73

R^2=0.61

For more details, see proceedings

Conclusion:
Temperature, global radiation and air humidity had a large effect on drying rate.
The type of swath affected the drying rate different for red and white clover grass.