



Effects on soil water content and productivity of selected crops in a field experiment with rain-out shelter vs. control plot in the Czech Republic

Experimental site in Domanínek

Location:

Bohemian-Moravian Highlands

Altitude:

590 m above sea level

Average annual **temperature**

(1981-2010): 7.2 ° C

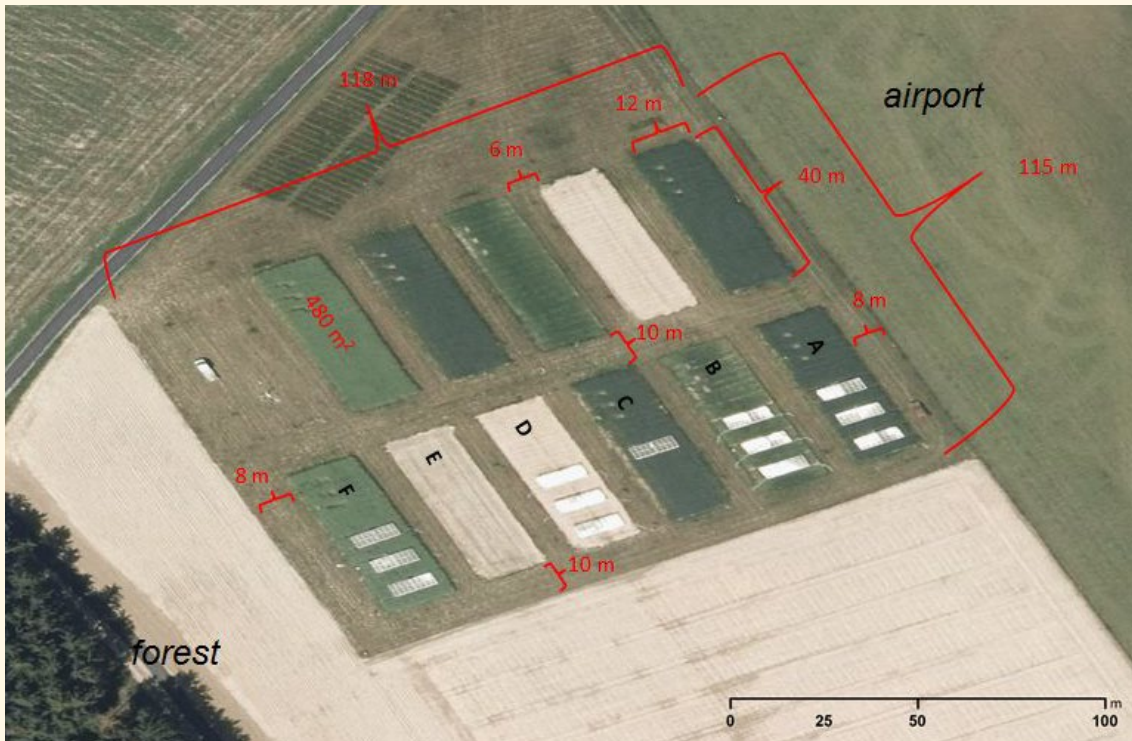
Average annual **rainfall**

(1981-2010): 609 mm

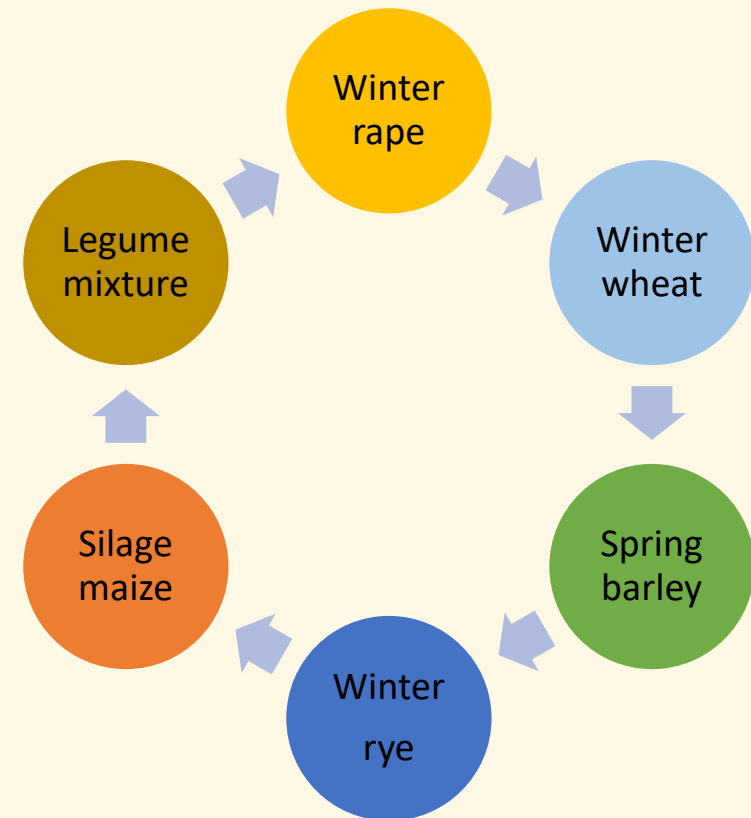


Field experiment with rain-out shelters

Setting up of the field trial with rain-out shelters

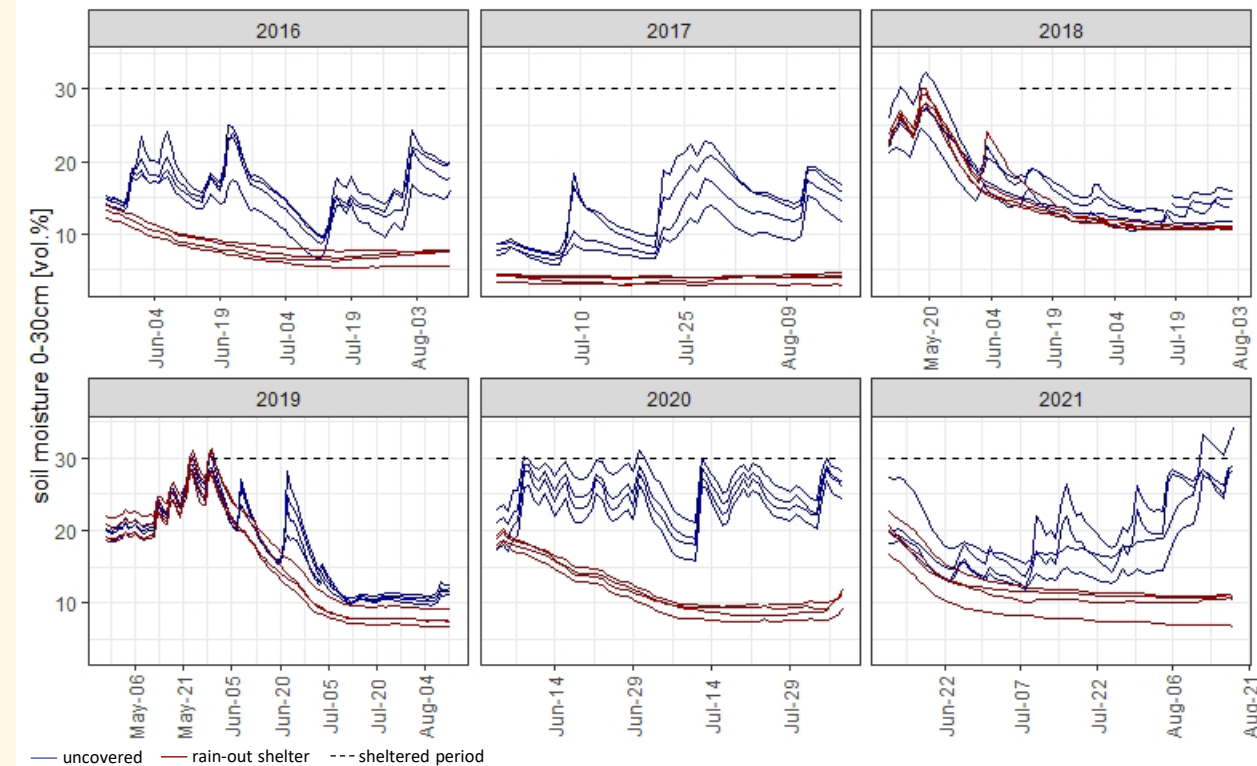


Crop rotation 2016-2021

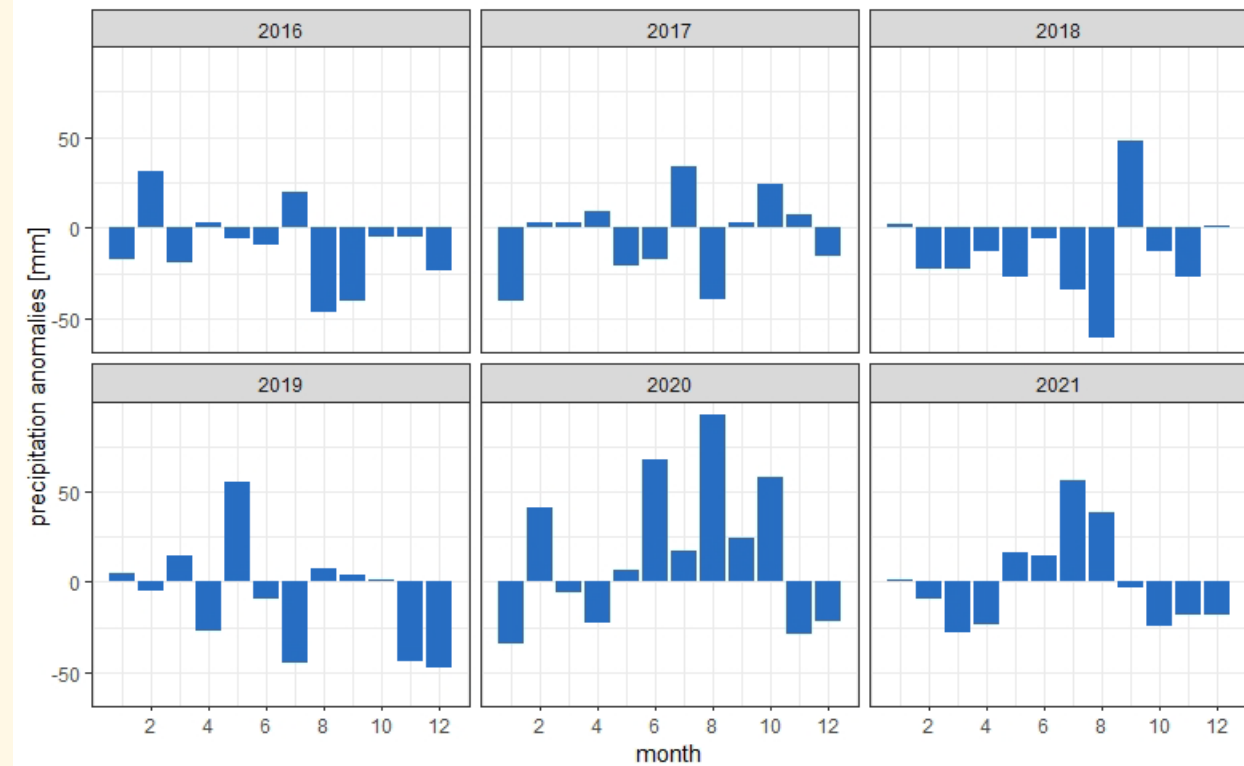


Spring barley

Measured soil moisture

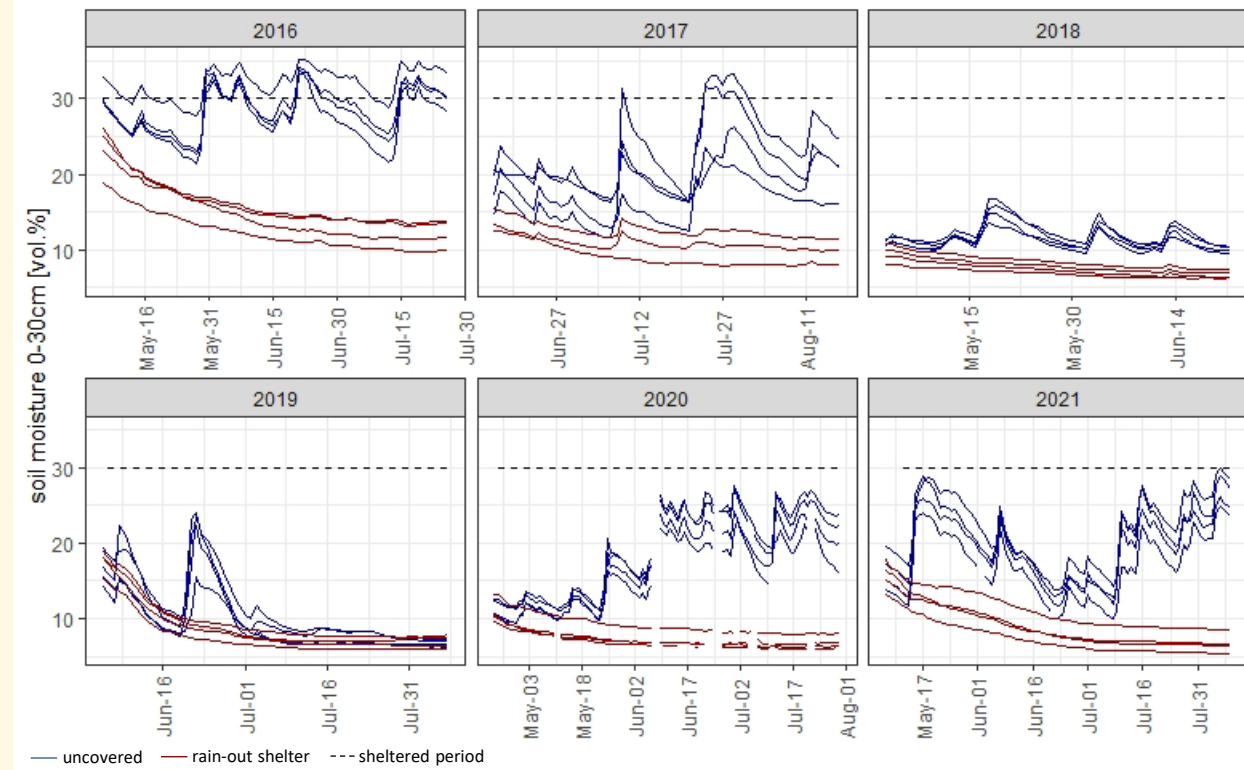


Precipitation anomalies to 1981-2010

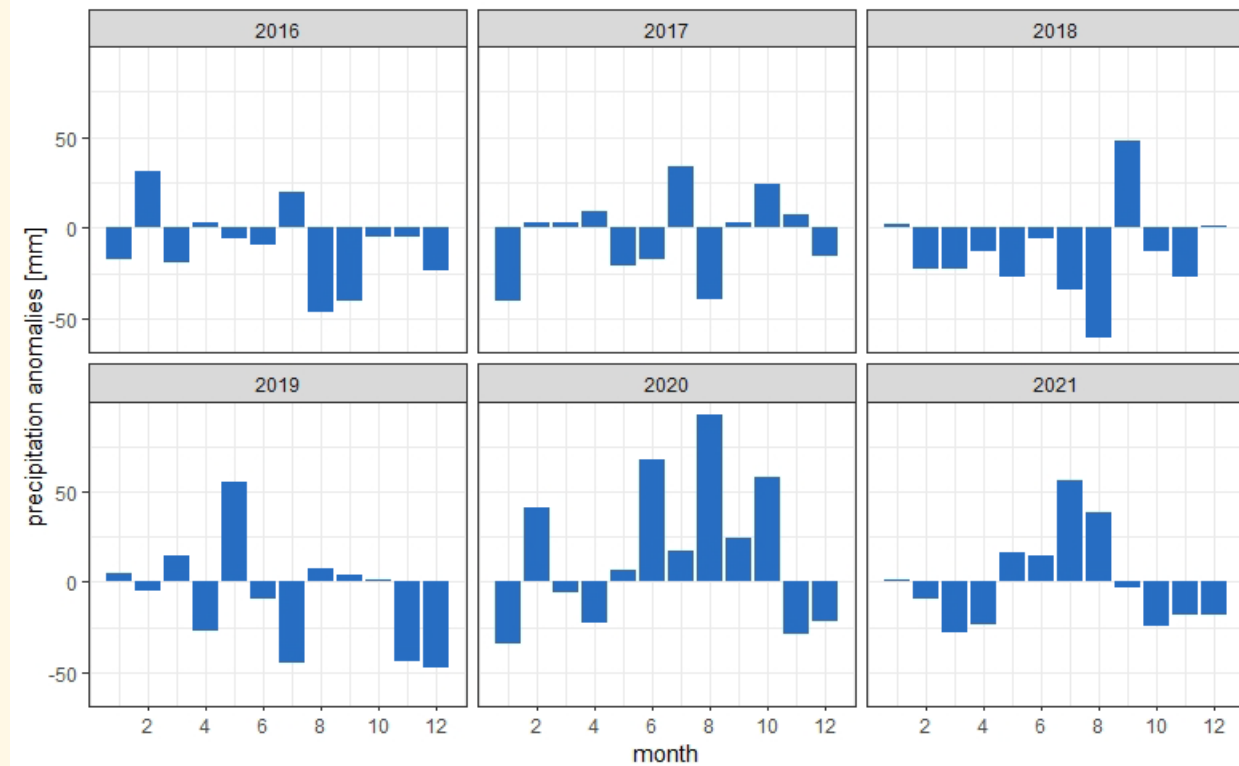


Winter rape

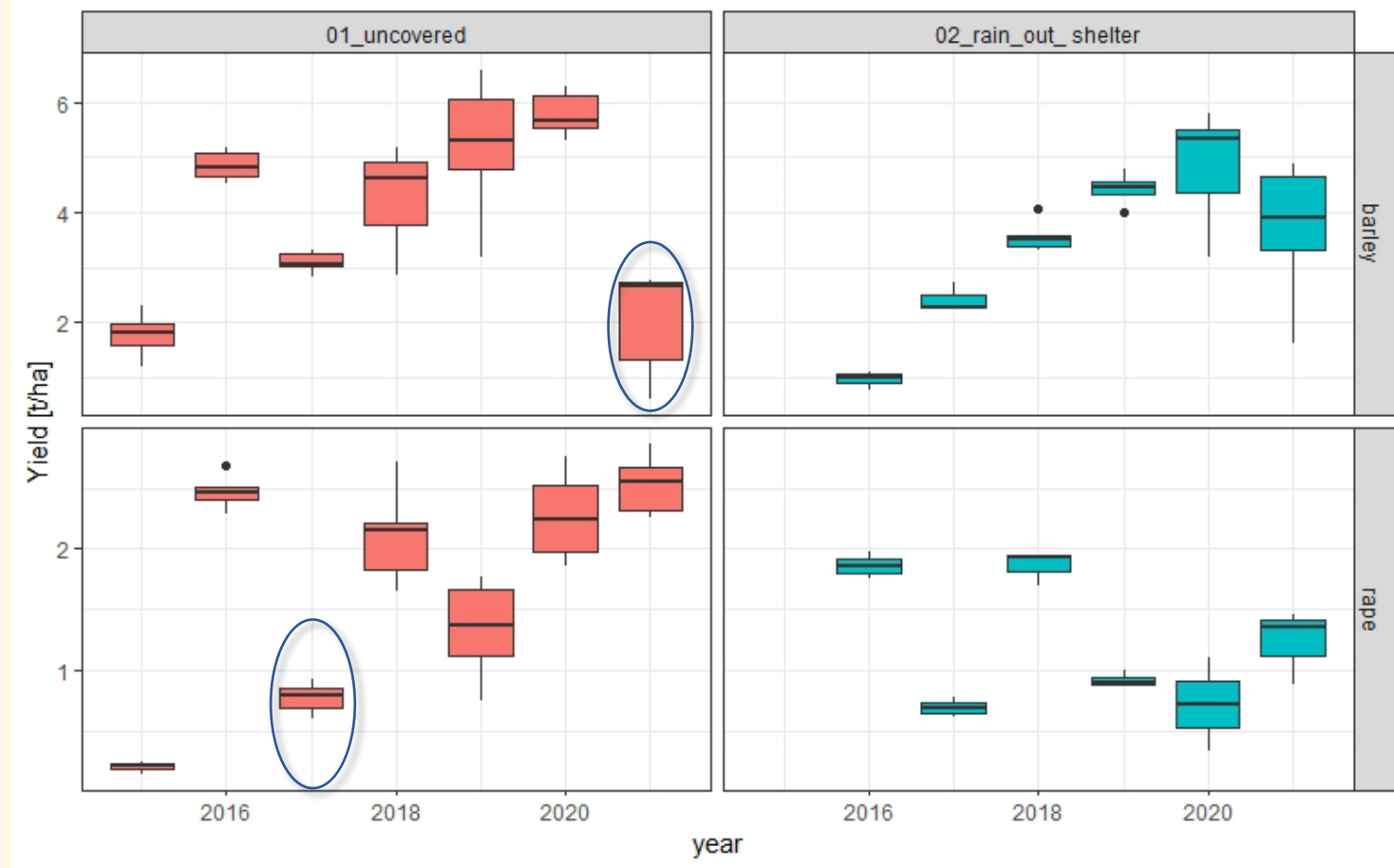
Measured soil moisture



Precipitation anomalies to 1981-2010



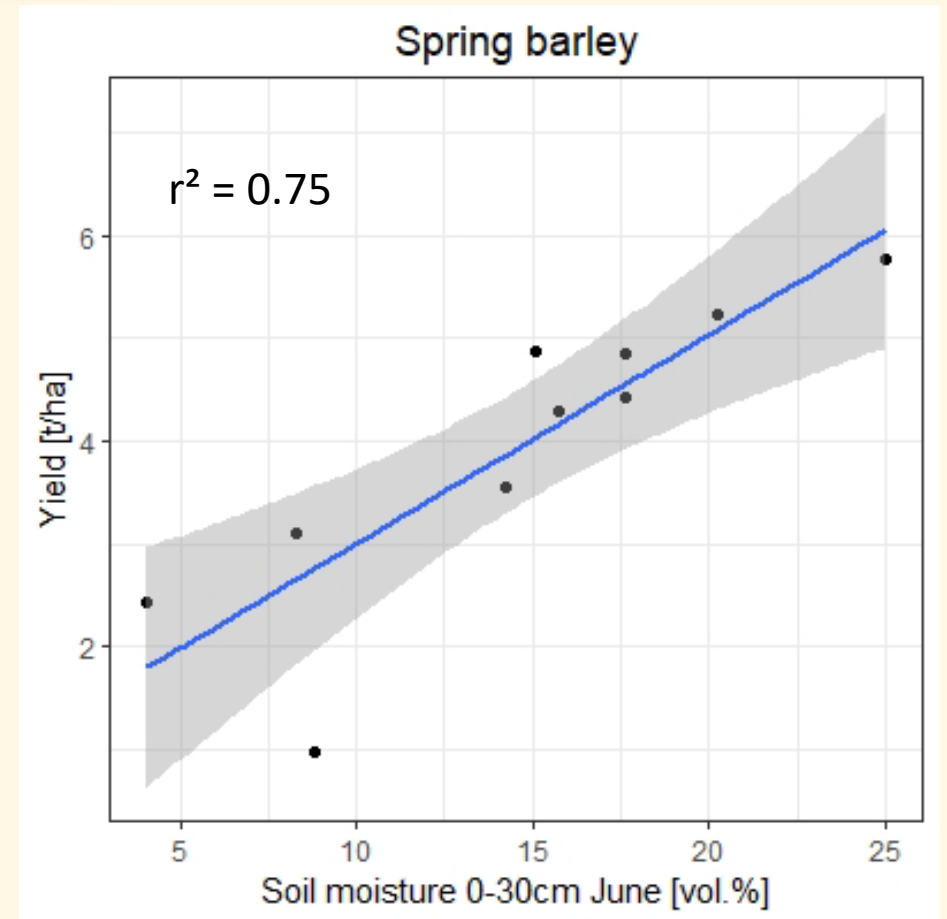
Yield



Statistical analysis: Spring barley

Yield~	ANOVA	Pearson's <i>r</i>
Precipitation Year	$F(1,8)= 6.85^*$	0.69*
Precipitation May	$F(1,8)=7.18^*$	0.69*
Precipitation June	not sig.	-
Precipitation July	not sig.	-
Soil Moisture May	not sig.	-
Soil Moisture June	$F(1,8)= 23.61^{**}$	0.86**
Soil Moisture July	$F(1,8)= 6.51^*$	0.67*

** p-value <0.01; * p-value <0.05



Statistical analysis: Winter rape

Yield~	Anova	Pearson's <i>r</i>
Precipitation Year	not sig.	-
Precipitation May	not sig.	-
Precipitation June	$F(1,8)= 8.83^*$	0.72^{**}
Precipitation July	$F(1,8)= 20.63^*$	0.85^{**}
Soil Moisture May	not sig.	-
Soil Moisture June	$F(1,8)= 11.73^*$	0.81^*
Soil Moisture July	$F(1,8)= 25.47^{**}$	0.97^{**}

** p-value <0.01; * p-value <0.05

