

LIST Meteorological Bulletin Spring 2017

The spring of 2017 in Luxembourg was warmer and much drier compared to the long-term average

Meteorological situation

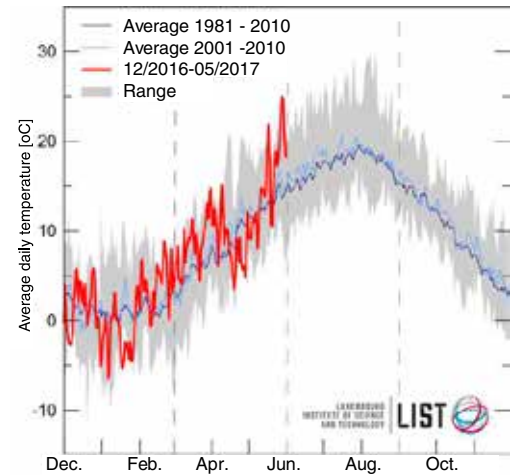
The spring of 2017 was characterised by high pressure, particularly in April and May. However, in March there was a frequent alternation between high and low pressure. At the end of the month, a south-westerly air stream dominated, drawing very mild air towards Luxembourg. The sustained influence of high pressure in April resulted in very dry weather. Polar air masses sometimes caused temperatures to drop below freezing at night. In May, with the arrival of warm, humid air masses at the start of the second ten day period, the risk of thunderstorms increased. From the second half of May, several high-pressure areas dominated, and on the last weekend of May, the «Walrita» high brought high summer temperatures to Luxembourg.

Temperature

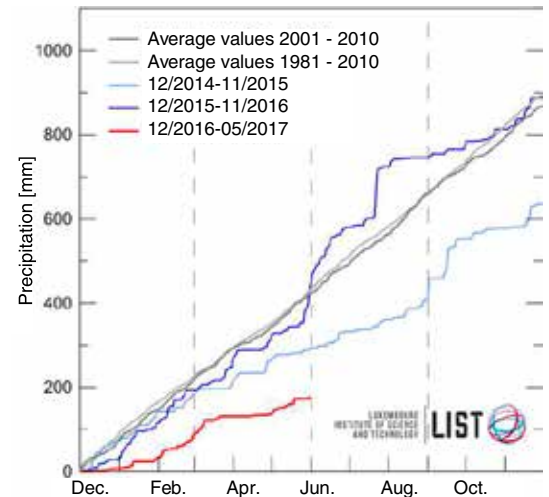
In the spring of 2017, the average seasonal temperatures at the evaluated stations of the «Administration des services techniques de l'agriculture» (ASTA) and the MeteoLux station were higher than those during the comparative period in 2010 - 2001. The smallest difference of 0.2°C was measured at the Echternach and Schimpach stations, while the largest difference of 1.3°C (1.8°C compared to 2010 - 1981) was recorded at Findel station. May 2017 was the warmest at the Remich station, with a monthly average of 15.8°C. An absolute maximum for the air temperature of 32.7°C was recorded at same station on 28 May, while a minimum of 9.3°C was registered on 20 April in Schimpach. The temperatures in March and May were well above those of the comparative periods. March 2017 equalled March 2012 as the warmest March at Findel station since records began in 1947.

Rainfall

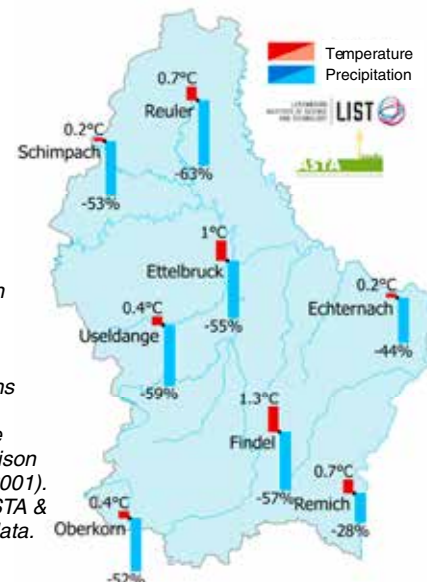
In contrast to the previous year, the total amounts of precipitation measured at analysed ASTA stations and the MeteoLux station in spring 2017 were well below the values for the comparative period in 2010 - 2001. Since 2001, only the springs of 2011 and 2014 have been drier. At Remich station, around a quarter (%28-) less rainfall was recorded, while at most other stations, less than half was recorded. The lowest level of rainfall of 83.4 mm was measured at Useldange station. The graph of rainfall at Findel station shows the substantial deficit during each of the three months. With total rainfall of 5.3 mm, April was the second-driest April since records began at Findel station in 1947.



Average air temperature (2010 - 2001 light blue; 2010 - 1981 dark blue) compared to winter 2017/2016 and spring 2017 (red). The range is defined by the absolute maxima and minima of the average daily temperature (grey). Data source: MeteoLux raw data (Findel station).



Average total precipitation (2010 - 2001 black, 2010 - 1981 grey) compared to the period from 2016/12 to 2017/05. Data source: MeteoLux raw data (Findel station).



Air temperature and precipitation anomalies for meteorological spring 2017 in different locations in Luxembourg compared to the -10 year comparison period (2010 - 2001). Data source: ASTA & MeteoLux raw data.

Hot Topic: Drought affects crop production

The large rainfall deficit, combined with the frosts in April, had a negative impact on the growth of agricultural and horticultural crops. An analysis by ASTA showed that losses of up to 50% were recorded for the first cut of permanent pasture. In the case of winter wheat, triticale and summer cereals, the lack of rainfall resulted in insufficient nitrogen uptake and problems with tillering. Depending on the location, in addition to reductions in yield, there are also fears of a deterioration in quality due to a lower thousand grain weight. The frost in April caused serious damage to flowering plants in the fruit growing sector, and also at several vineyards. Horticulture was negatively affected by the drought and incurred high costs due to the need for irrigation.