



Agricultural Meteorology

The object of the course is to acquaint the students, at a theoretical and applied level, with issues related to the formation of conditions in the lower strata of atmosphere (atmospheric boundary layer) with an emphasis on its lowest layer (surface boundary layer) and on small spatial and temporal scales that are of interest to Agriculture.

Course content:

- The configuration of the atmospheric conditions and especially the radiation balance is analyzed.
- Atmospheric circulation is examined along with its associated horizontal motions with particular emphasis on the wind parameter in relation to topographic relief, land/sea coexistence and the shaping of the wind speed profile over and within the crop canopy.
- Atmospheric disturbances and the weather associated with them are analyzed, particularly in relation to agricultural holdings and the possibilities and measures of protection agricultural crops from adverse weather conditions.
- The balance of radiation and energy is analyzed in characteristic spatial and temporal scales but also in different ground covers, orientations and slopes as well as the resulting micrometeorological-microclimatic conditions within characteristic crops.
- Precipitation is particularly analyzed, both spatially and temporally its distribution in combination with evapotranspiration (potential and actual) and which shape the water balance in the field.
- Finally, the micro-meteorological conditions that shape the atmospheric burden levels from sources of air pollution in agricultural areas are analyzed.