



## **The Pan European Phenological Database PEP725: Data Content and Data Quality Control Procedures**

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Phenology – the study of the timing of recurring biological events in the animal and plant world – has become an important approach for climate change impact studies in recent years. It is therefore a “*conditio sine qua non*” to collect, archive, digitize, control and update phenological datasets. Thus and with regard to cross-border cooperation and activities it was necessary to establish, operate and promote a pan European phenological database (PEP725).

Such a database – designed and tested under cost action 725 in 2004 and further developed and maintained in the framework of the EUMETNET program PEP725 – collects data from different European governmental and nongovernmental institutions and thus offers a unique compilation of plant phenological observations. The data follows the same classification scheme – the so called BBCH coding system – that makes datasets comparable.

Europe had a long tradition in the observation of phenological events: the history of collecting phenological data and their usage in climatology began in 1751. The first datasets in PEP725 date back to 1868. However, there are only a few observations available until 1950. From 1951 onwards, the phenological networks all over Europe developed rapidly: Currently, PEP725 provides about 9 million records from 23 European countries (covering approximately 50% of Europe).

To supply the data in a good and uniform quality it is essential and worthwhile to establish and develop data quality control procedures. Consequently, one of the main tasks within PEP725 is the conception of a multi-stage-quality control. Currently the tests are stepwise composed: completeness -, plausibility -, time consistency -, climatological - and statistical checks.

In a nutshell: The poster exemplifies the status quo of the data content of the PEP725 database and incipient stages of used and planned quality controls, respectively. For more details, we would also like to promote and refer to the PEP725 website (<http://www.pep725.eu>) and invite additional institutions and regional services to join our program.