

DATA SET DESCRIPTION

Phenological observations of wild plants, including forest and ornamental woody plants from beginning of sprouting and flowering to ripening, also falling of leaves for some species (immediate reporters, recent)

Version recent

Cite data set as: DWD Climate Data Center (CDC): Phenological observations of wild plants, including forest and ornamental woody plants from beginning of sprouting and flowering to ripening, also falling of leaves for some species (immediate reporters, recent), Version recent, 2018.

INTENT OF THE DATASET

This describes the freely available data of the DWD Climate Data Center (CDC). The phenological data are quality controlled and flagged with a quality byte.

POINT OF CONTACT

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DATA DESCRIPTION

Spatial coverage Germany

Temporal coverage last year - current year

Temporal resolution annually

Format(s) Ascii. Each file PH_Sofortmelder* contains the observation of a certain species (e.g., elder), with fixed object_id (e.g., 129). The rows are sorted according to Stations_id, reference year, phase_id. Each row corresponds to one observation. The list with all phenological stations and corresponding meta-data can be found here: https://opendata.dwd.de/climate_environment/CDC/help/PH_Beschreibung_Phaenologie_Stationen_Sofortmelder.txt .

Parameters Common wormwood, birch (all species), alder (all species), common hazel, coltsfoot, dandelion, black locust, horse chestnut, European beech, goat willow, blackthorn, common snowdrop, European alder, black elder, large leaved lime, pedunculate oak, meadow foxtail.

Qualitaetsniveau	see	Quality_flags
Stations_id	see	stations immediate reporters
Referenzjahr		year corresponding to phase
Objekt_id	see	phase definition
Phase_id	see	phase definition
Eintrittsdatum	date of observation	yyyymmdd
Eintrittsdatum_QB	see	Quality_flags
Jultag	date of observation	day of the year

Uncertainties Factor for uncertainty is the change of the observer.

Quality information	The Qualitätsniveau describes the data control. The individual dates are flagged with a quality byte (Eintrittsdatum_QB).		
	Qualitätsniveau:		
		1	only formal control
		2	controlled on individual criteria
		7	systematically controlled and flagged but not corrected
	Eintrittsdatum_QB		
		0	not checked
		1	correct
		5	uncertain

DATA ORIGIN

A fixed observation area is assigned to every phenological observer. Each observation area has a station-id assigned by the network administration. The observer registers the first detected resp. the latest occurrence of determined growth stages independent of plant specimen, site or field. The observation were reported immediatly online or by phone and archived in the climate data bank of DWD.

VALIDATION AND UNCERTAINTY ESTIMATE

During the operational handling of phenological data each year a spatial quality control has been performed. Each year 1 - 2 % of the data are flagged to be wrong. Causes could be confusion of months and phases

CONSIDERATIONS FOR APPLICATIONS

BBCH code see [phase definition](#).

ADDITIONAL INFORMATION

English and Latin names of plants are listed in https://opendata.dwd.de/climate_environment/CDC/observations_germany/help/PH_Beschreibung_Pflanze.txt. For the English name of the phase see https://opendata.dwd.de/climate_environment/CDC/observations_germany/help/PH_Beschreibung_Phase.txt. According to experience, at some sites a few plant species are not, not continually or only partly observed. Data sets are from about 400 - partly each year alternated - stations since 01.01.1979 for West Germany; since 01.01.1992 onward all parts of Germany are covered. When using phenological data, it is advisably to use several stations characteristically of a natural area or natural area group. In this way, the data have less gaps and the specifics of a single station are less prominently in influencing the results. The classification of natural areas and natural area groups used by Deutscher Wetterdienst (DWD) for phenological data is based on the map Naturräumliche Gliederung und Waldverbreitung (Meynen und Schmithüsen, 1953-1962), see also https://de.wikipedia.org/wiki/Handbuch_der_naturr%C3%A4umlichen_Gliederung_Deutschlands. For applications related to climate research, the observations provided by annual reporters should be preferred. Observation criteria for current pheno phases are defined in the [instructions for observers](#).

REFERENCES

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Bruns, E., van Vliet, A.J.H.: Standardisation of phenological monitoring in Europe. Wageningen University, Deutscher Wetterdienst, 2003.

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REVISION HISTORY

The data are updated daily. This document is maintained by DWD National Climate Data Center (NKDZ), last edited on 19.12.2018.