



The Possible Goals of Phenological Network in Classical Form and Utilization of Remote Sensing Technique, mainly the Results of COST Action 734

Zoltan Dunkel (1), Leonidas Toulios (2), and Marta Hunkar (3)

(1) OMSZ - Hungarian Meteorological Service, Budapest, Hungary (dunkel.z@met.hu), (2) National Agricultural Research Foundation: Larissa, Greece (ltoulios@nagref.gr), (3) Pannon University - Georgikon Faculty, Keszthely, Hungary (hunkar@georgikon.hu)

The phenological observation traditionally is a part of „agrometeorological” activity. In ‘classical time’ the phenological information was used to support the (agro)meteorological extension services, mainly the yield forecast. A survey was carried out in the frame of the WMO RA VI Working group for Agricultural meteorology concerning the phenological observation in the Region. The results of the evaluation of the questionnaire are presented how the traditional phenological observation is used. The majority of phenological networks are maintained by national (hydro)meteorological services. The oldest networks were organised in the 1920’s and the most new phenological networks were initiated in the 1940’s and 1950’s. The density of networks shows great variability. The plant phenological observation network in Hungary was run by the plant protection administration but financially was maintained by OMSZ therefore the main aim of the phenological observation in Hungary was to give information for plant protection forecast. The system was closed in 2001 because of financial restriction. Beside the standard meteorological observation the use of phenological observation seems to be a good tool to detect the trace of climate change. Taking into consideration of necessity of systematic phenological observation mainly as a possible tool of climate change detection and seeing the results of COST Action 725 a project proposal was submitted for reconstruction of the phenological network. The main problem is in case of phenological observation how to find long homogeneous data series. During the reconstruction of phenological observation network not only the possibility of establishment of new system was investigated but how can we use the old data from point of view of climate change. Another import question is wether the remotely sensed information could be used as base of phenological observation. Beside the main historical milestones of Hungarian phenological history the most important elements of the new plan and the possibilities of the use of the results of COST Action 734 will be shown.