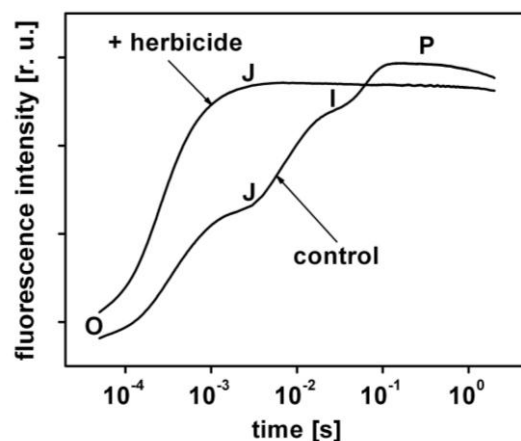


Dosage optimization of selected herbicides and monitoring of their degradation in plants

Department of Biophysics

● **Service description**

An important number of herbicides used in practice kill the weeds by changing the electron transport in chloroplast thylakoids. These include herbicide groups C1, C2, C3 and D, according to the classification of HRAC (Herbicide Resistance Action Committee). Binding of these herbicides to photosystems can be monitored noninvasively by the measurement of chlorophyll fluorescence kinetics (fluorescence induction), which lasts approximately one second. This method is applicable also for the monitoring of the degradation of herbicides in plants. The measurement of fluorescence induction with plants treated with herbicides of different concentration for different time can be used for the determination of optimal dosage of herbicides.



● **Basic equipment related to the service**

Our laboratory is equipped by a great number of instruments suitable for the measurement of fluorescence induction, e.g. PEA fluorometer (Hansatech, Great Britain) or portable FL-100 fluorometer (Photon Systems Instruments, Czech Republic).

● **Price and other terms**

The particular price depends on the type and arrangement of the service. Based on mutual agreement, it is also possible to use more sophisticated fluorometers and evaluate various additional parameters that reflect the function of photosynthesis and that in principle can be used for the monitoring of the action of any herbicide. Feel free to contact the scientist listed below for preliminary consultation.

● **Contact**

Head of department:
Petr Ilík
Telephone: +420 585 634 153
E-mail: ilik@prfnw.upol.cz

