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 CHANGES OF THE MEMBRANE MATRIX REARRANGE PIGMENT COMPLEXES

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The influence of a pyridazinone-type herbicide (BASF 13338, SAN 9785, 160 μ M, 1-7d) on photosynthetic membranes of *Petunia* hybrids was investigated using low temperature fluorescence kinetics. The F_0 and F_2 signals were measured simultaneously, digitized on line with a micro computer and stored in core memory. According to the energy flux theory for biomembranes (STRASSER 1980) spill over, grouping and trapping characteristics of the samples can be analysed in terms of energy fluxes, rate constants and energy transfer probabilities. The results are in agreement with the model for state changes in photosynthetic units (STRASSER 1984). The results are treated/control) spill over >1, grouping <1, LHC-P <1, abs. PS I/abs. PS II <1, available acceptors/abs. PS II <1. We conclude, that the herbicide alters the lipid matrix of the thylakoid membrane so that the pigment complexes are forced to be rearranged. This leads to a lack of adaptation of the plant to environmental changes (GRAF et al. 1984 Con. Photos).

