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## **Position of the Committee on Agronomic Sciences of the Polish Academy of Sciences on modern plant phenotyping**

The Committee of Agronomic Sciences of the Polish Academy of Sciences **proposes the creation of a national infrastructure for phenomic research** based on modern plant phenotyping. Access to such infrastructure will increase the competitiveness of Polish science in basic and applied research. The use of phenotyping platforms in basic biological research will significantly increase knowledge about the interaction of the environment and genotype at the molecular level. The application of phenomics in plant breeding research can increase the efficiency of selecting new varieties adapted to the progressing climate change.

The Committee of Agronomic Sciences of the Polish Academy of Sciences believes that **a modern infrastructure for phenomic research on plants is a necessary condition for the implementation of research and development projects** in strategic support programs for the agricultural sector and processing of agricultural crops. Plant phenotyping equipment facilitates the study of plant biodiversity and their adaptability to changing climatic conditions, and the obtained research results will accelerate the transfer of know-how to domestic plant breeding and increase the efficiency of selection processes leading to the emergence of new varieties with the expected parameters on the seed market.

Therefore, the Committee of Agronomic Sciences of the Polish Academy of Sciences expresses the opinion that **it is necessary to increase the interest of R&D fund holders in the investment intentions of individual units and in plans to establish national cooperation in the field of plant phenotyping**, due to the significant cost of this venture.

At the same time, the Committee would like to draw attention to the important role of international cooperation in the field of modern plant phenotypic research. In the absence of a national infrastructure for phenomic research, it is important for Polish scientists to actively cooperate internationally and participate in the joint use of existing infrastructure in Europe. The European ESFRI (European Strategy Forum on Research Infrastructures) platform, which will set the highest standards in the field of plant phenomics in the coming years, is EMPHASIS (European Infrastructure for Plant Phenotyping), a distributed infrastructure in the stage of implementation. **The Committee urges the Ministry of Education and Science to participate in the work of EMPHASIS** at least as an observer, which will allow for the exchange of expertise in the applications and methodology of phenotyping and for deciding on other forms of participation.