Name and surname:	**Magdalena Szymura**
Academic Degree:	dr hab. (DSc.)
Institute/Department:	Institute of Agroecology and Plant Production
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UPWr Base of Knowledge - link:	https://bazawiedzy.upwr.edu.pl/info/author/UPWr10dff724d2e34149a917b1d058fd5f93/Profil%2Bosoby%2B%25E2%2580%2593%2BMagdalena%2BSzymura%2B%25E2%2580%2593%2BUniwersytet%2BPrzyrodniczy%2Bwe%2BWroc%25C5%2582awiu?r=author&tab=&lang=pl
Researchgate:	https://www.researchgate.net/profile/Magdalena-Szymura
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	2019-2021 - PROW project - Innovative cattle breeding methods to obtain the best quality Lower Silesian beef - RF 2019-2023 - National Science Center grant - Spatial diversity of the species richness of vascular plants in Poland - patterns, drivers and expected changes - RF 2020-2023 - PROW project - Innovative methods of sheep farming and breeding in the light of the changing climatic conditions of Lower Silesia - PI
PhD topic:	Assessment of the plant invasion risk in agricultural landscape connected to climate change
Research discipline in Doctoral School:	Agriculture and Horticulture
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	Plant invasions, together with habitat changes, are one of the most serious threats to biodiversity worldwide. Global changes, including climate and socioeconomic, strongly affect agricultural landscapes. As a result, wide areas of arable lands and grasslands are abandoned, and on the other hand, the management intensity is increasing. The depopulation is observed in agricultural lands in Central Europe caused by the low cost-effectiveness of arable production, as well as the consolidation of farms, and the digitalization of agriculture. The observed climate changes cause the increase in yearly temperature and the occurrence of heavy rains occurring between long periods of drought. These changes cause the possibility of spreading the new to the region invasive species, previously limited by climate, land-use practices, and restricted introduction ways. The aim of the thesis is an assessment of the risk of invasion of the new to Central Europe alien plant species. There will be tested hypotheses that changes in climate and management increase the invasion level in the agricultural landscape, both in the number of invasive species, and their abundance. The first step of the analysis will be to define the list of alien species which can potentially increase their range or can be introduced intentionally or accidentally and become naturalized in Central Europe, based on the detailed analyses of biology, and habitat niches described in the literature. Next, the MaxEnt Modeling will be used to predict the future distribution of the new invasive species in the agricultural landscape in Central Europe, as well as the environmental and socio-economic variables will be applied to highlight the most endangered habitats and localities.
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	Graduation in biological, agricultural or environmental sciences. Good command of English language in reading, writing and talking. Basic knowledge in the field of plant ecology and taxonomy; experience in field work, as well as big databases analyses. Basic skills in recognition of plant species and the knowledge about process of plant invasions. The ability to use MS Office package, and statistical tests, including modelling. The candidate is expected to participate in scientific internships and scientific conferences.
a) Project title:	
b) Agreement number:	
c) Number of months in the project to support PhD (in months; starting from 1st of October 2022):	
Project website:	