

Popular scientific project description for project funded by Ekhagastiftelsen

Popular scientific project description is to be submitted within 2 months of project grant.

Application number:	2023-25
Project title:	Increasing crop genetic DIVERSity to close the yield gap in Organic Wheat farming (DIVERSOW)
Receiver of grant (name, address):	Sveriges Lantbruksuniversitet Department of Crop Production Ecology Box 7043 Ulls väg 16 750 07 Uppsala Sverige/ Sweden
Contact / project manager:	Darwin Hickman
Project start (yyyy-mm-dd): *	2024-03-01
Project end (yyyy-mm-dd): *	2026-03-31
By Ekhagastiftelsen granted sum:	1 750 000 SEK

Project description: (max 150 words)

Modern crop cultivars have been bred for conventional farming, and therefore depend on high inputs of fertilizers and pesticides. This means that these cultivars underperform under low input conditions, such as in organic farming. In comparison, landraces and heritage cultivars are local and older varieties with greater genetic diversity. They show a broader spectrum of characteristics and can adapt better to changing environmental conditions. Despite their adaptability, landraces have a lower yield potential than modern cultivars in most agricultural conditions. DIVERSOW will examine the effect of introduced and increasing diversity on crop performance, through growing of two crops simultaneously. The effect will be investigated holistically, connecting the above and belowground plant and environment to yield quality and quantity. This will be done by combining modern, heritage, landrace cultivars of wheat, and legumes. The overall goal is to close the yield gap in organic farming.

* Dates for project start and end should be the dates for which the grant is received (Not dates for total project if longer than period for which grant is received)