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:	2019-16
Project title:	The influence of rainfall patterns and intensity on nitrogen mineralization from organic amendments
Receiver of grant (name, address):	Kehinde Olajide Erinle, School of Agriculture, Food and Wine, The University of Adelaide, Australia
Contact / project manager:	Kehinde.Erinle@adelaide.edu.au/ Erin.okennie@gmail.com
Project start (yyyy-mm-dd): *	01/11/2019
Project end (yyyy-mm-dd): *	31/12/2021
By Ekhagastiftelsen granted sum:	1,390,000 SEK

Project description: (max 150 words)

The nutrient that most strongly limits plant productivity is nitrogen (N). Organic soil amendments contain N, but it has to be mineralized by microorganisms before it can be taken up by plants. N mineralization from organic soil amendments is influenced by their N concentration and by soil water content because microbial activity is affected by water availability. With changing climate, dry periods are likely to increase in length and intensity which can be interrupted by rainfall events. In order to maximize the effectiveness of organic amendments as N source for plants, we need a better understanding of how N mineralization is affected by dry and rewetting periods and how this is modulated by the N concentration of the amendment. This project aims to elucidate how drying–rewetting cycles influence N mineralization, crop N uptake and N use efficiency in soil amended with organic amendments differing in N concentration.

* 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)