

Conservation Agriculture and glyphosate – Strategies, lock-ins and diversity in the Belgian Walloon Region

M. S. Ferdinand¹, P. Bertin¹, P. V. Baret¹

¹Earth and Life Institute / UCLouvain, Louvain-La-Neuve, Belgium

Abstract

Conservation Agriculture (CA) consists of an alternative agriculture system based on the protection of the soil. CA promotes a minimum tillage and soil disturbance, a permanent soil cover and a diversification of crops [1]. In Belgium only 270 ha are under CA practices [2]. The expansion of the system is limited by dependence to glyphosate [3, 4, 5], a total herbicide that may be banned in 2022 [6]. By conducting semi-directed interviews in Wallonia, this study identified two kinds of strategies to build a CA without glyphosate. The first one includes strategies which optimize glyphosate efficiency (optimal spraying conditions, spray solution composition, low volume technique...) while the second gathers strategies which replace glyphosate for the destruction of cover crops, volunteers from previous cropping and weeds (soil working tools, fodder breaks, pasture...). Farmers use some strategies rather than others based on different trade-offs, which are economic, managerial, institutional, environmental, social or technical. Understanding the interaction between these compromises and the choice of strategies employed allows to define the transition pathways of farmers practicing CA or those who may soon adopt it.

References

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