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**RESEARCH
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‘HOW TO RECONCILE AGRICULTURAL PRODUCTION WITH ENVIRONMENTAL PRESERVATION THROUGH AN EFFICIENCY ANALYSIS: “LAND SPARING” VERSUS “LAND SHARING”?’

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ABSTRACT

Reconciling agricultural production with environmental preservation is one of the most challenging issues in the agricultural sector. We address this issue through considering two strategies for land management: the “land sharing” and the “land sparing”. We use efficiency analysis with the DEA method to measure the potential for implementing these two strategies taking into account farm categories. These categories were defined according to two criteria: agricultural land productivity, and the share of livestock in total production. With an application to farm data from the Meuse Department over the period 2014-2016, the results show that agricultural production can be reconciled with environmental preservation by sparing 25% of farmland for the environment, or by reducing agricultural intensity by 26% on all farmlands. Taking into account our farm categorization, as regards the criterion of land productivity, our findings suggest that land sparing would be more appropriate for less productive farms and land sharing for more productive; regarding the share of livestock, land sparing (land sharing) would be more appropriate for farms less (more) dominated by livestock. Our results underline the importance of taking into account farms’ characteristics in implementing an agricultural land management strategy for environmental preservation.