

FLORIDA FARMERS' MULTI-BMPs ADOPTION: A SURVEY ANALYSIS

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Agriculture is a major contributor to surface water and groundwater pollution and freshwater withdrawal. Using agricultural Best Management Practices (BMPs) can reduce the negative impact on the environment (Frydenborg and Frydenborg 2016), which elevated the interest in BMPs adoption. However, the existing adoption literature focuses mainly on factors, farmers' characteristics, and single adoption (i.e. Mpanga and Idowu, 2021; Palmate and Pandey, 2021; Bergtold et al., 2012). To our knowledge, little was done on multi-BMPs adoption. Therefore, we use data collected from online, mail, and face-to-face survey to understand Florida farmers' perceptions of the simultaneous BMPs multi-use costs and benefits. Simulated maximum likelihood procedures are used to identify the factors leading to the multi-BMPs adoption and frequency analysis is used to identify BMP use patterns and commonly used BMP bundles. We identify the BMP use by county using The Spatial Join function from ArcGIS 10.7.1 (ESRI Inc. 2019). We expect that larger farms implement more BMPs bundles than small farms and that there is a complementarity relationship among some of the BMPs.

Orienting the focus on multiple BMPs adoption rather than single adoption opens the possibility to improve BMPs adoption policies, increase farmers' benefits, and reduce farmers' adoption and education costs (Amacher and Feather 1997; Cooper 2003).

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