# INPLASY PROTOCOL

## (Why) Do farmers' Big Five personality traits matter? – A systematic literature review

Lehberger, M[1]; Grüner, S[2].

**Review question / Objective:** We aim at answering the following two research questions: 1. How and when do researchers use the Big 5 personality traits when focusing on farmers (research questions, measurement of personality traits)? 2. Do the Big 5 personality traits contribute to explaining (economic) behaviors of farmers?

**Eligibility criteria:** We consider all studies published in the English language, which include primary empirical data from farmers and explicitly focus on the construct of the big five-personality traits and include a measurement of at least one big five-personality traits. We include studies from all available years and include all types of publications.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 March 2022 and was last updated on 24 March 2022 (registration number INPLASY202230138).

### INTRODUCTION

**Review question / Objective:** We aim at answering the following two research questions: 1. How and when do researchers use the Big 5 personality traits when focusing on farmers (research questions, measurement of personality traits)? 2. Do the Big 5 personality traits contribute to explaining (economic) behaviors of farmers?

**Rationale:** Into their research to better understand farmers' behavior. The intersection of psychology and economics has also been referred to as behavioral economics. While behavioral economists put a lot of emphasis on analyzing nudges (i.e., small changes in individuals' decision environment without altering monetary incentives), the big five personality traits have been used much less frequently.

Rationale 1: Our first goal is to give an overview of how and in what contexts the big five are used in research regarding farmers.

Rationale 2: We then provide an overview of how the big five contribute to explaining (economic) behaviors of farmers.

Condition being studied: Not applicable.

METHODS

Search strategy: Within this project, we aim at conducting the literature review strategically as follows: We search in the following four databases for relevant studies: Web of Science (WoS), Scopus, AgEcon and PubMed. We consider all available years and include all types of publications. We consider two broad concepts in our search query: the big five personality traits and farmers. For each concept, we use multiple alternative search terms and adapt the search query to the specificities of each database search. For Web of Science, we use the search query: ALL=(("Big Five" OR "Big 5" OR "Five Factor model" Or "5 factor model") AND (farm* OR "smallholder*" OR "ranger*")); for Scopus : ALL (("big five" OR "big 5" OR "Five Factor model" OR "5 Factor model") AND (farm* OR smallholder* OR ranger*)); for PubMed (("Big Five") OR ("Big 5") OR ("five factor model") OR ("5 factor model") AND ((farm*) OR (ranger*) OR (smallholder*)); and for AgEcon: (("Big Five") OR ("Big 5") OR ("five factor model") OR ("5 factor model")) AND ((farm*) OR (ranger*) OR (smallholder*)). In addition to the database searches, we identify authors, who have published multiple articles concerning our research questions and contact them regarding possible other relevant studies. Also, we go through the list of references of the final sample and consider all relevant studies.

Participant or population: We include all studies that focus on farmers, regardless of their production focus (e.g., plant production and animal production), the region or country in focus or any other socio-economic trait.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: We consider all types of studies (case studies, randomized controlled trials, surveys, etc.).

Eligibility criteria: We consider all studies published in the English language, which include primary empirical data from farmers and explicitly focus on the construct of the big five-personality traits and include a measurement of at least one big five-personality traits. We include studies from all available years and include all types of publications.

Information sources: We search in the following four databases for relevant studies: Web of Science (WoS), Scopus, AgEcon and PubMed.

Main outcome(s): 1. Regarding our first research question our main outcome is an overview on how (e.g., to what extent) and in what contexts the big five are used in research regarding farmers. This will include, for instance, a characterization of the studies as well as farmers, or the measurement instruments used for capturing the big five. 2. Regarding our second research question, we present how personality traits of farmers relate to farmers' stated, observed or measured behaviors. Here, we will include all types of behavior.

Quality assessment / Risk of bias analysis: To assess the quality of the included studies, we discuss aspects such as sample size, logical consistency of statistical inference / statements on p-values, pre-registration, robustness checks and publication type.

Strategy of data synthesis: Our review focuses on a qualitative analysis of the evidence. Basic descriptive information will also be presented (e.g., counts).

Subgroup analysis: Not applicable.

Sensitivity analysis: Not applicable.

**Language:** We include studies written in the English language only.

**Country(ies) involved:** Germany.

**Other relevant information:** Mira Lehberger is affiliated to the Hochschule Geisenheim University, Department of Horticultural Economics, Hochschule Geisenheim University, Germany. Sven Grüner is affiliated to the Martin Luther University, Halle-Wittenberg, Agribusiness Management, Germany.

**Keywords:** Big Five personality traits; five factor model; farmer; smallholder; behavioral economics; agricultural policy; food policy; systematic review.

**Dissemination plans:** We intend to publish the systematic review in a scientific journal. Possible other dissemination may be scientific conferences. Data and pre-print versions will also be published on a pre-print platform.

**Conflicts of interest:** The authors declare that we have no relevant or material financial interests that relate to the research described in this project or any other conflict of interest to declare.

**Contributions of each author:**
Author 1 - Mira Lehberger.
Email: mira.lehberger@hs-gm.de
Author 2 - Sven Grüner.
Email: sven.gruener@landw.uni-halle.de