

Exame de Proficiência

2023.2

Inglês

Ciências Agrárias

Instruções

1	Confira se os dados contidos na parte inferior desta capa estão corretos e, em seguida, assine no espaço reservado para isso. Se, em qualquer outro local deste Caderno, você assinar, rubricar, escrever mensagem, etc., será excluído do Exame.
2	Este Caderno contém 5 questões discursivas referentes à Prova da Língua Estrangeira escolhida pelo candidato. Não destaque nenhuma folha.
3	As respostas às questões deverão ser redigidas em PORTUGUÊS .
4	Se o Caderno estiver incompleto ou contiver imperfeição gráfica que impeça a leitura, solicite imediatamente ao Fiscal que o substitua.
5	Será avaliado apenas o que estiver escrito no espaço reservado para cada resposta, razão por que os rascunhos não serão considerados.
6	Escreva de modo legível, pois dúvida gerada por grafia, sinal ou rasura implicará redução de pontos.
7	Só será permitido o uso de dicionário INGLÊS/INGLÊS.
8	A Comperve recomenda o uso de caneta esferográfica, confeccionada em material transparente, de tinta preta. Em nenhuma hipótese se avaliará resposta escrita com grafite.
9	Utilize para rascunhos o verso de cada página deste Caderno.
10	Você dispõe de, no máximo, três horas, para responder as 5 questões que constituem a Prova.
11	Antes de retirar-se definitivamente da sala, devolva ao Fiscal este Caderno.

Assinatura do Candidato: _____

ENHANCING FARMERS' SOIL CONSERVATION BEHAVIOR: BEYOND SOIL SCIENCE KNOWLEDGE

Elliot Burnham et al.

Introduction

It has long been recognized that the conventional agricultural paradigm has traditionally emphasized productivity (Beus and Dunlap, 1994), yet there is mounting pressure on agriculture to prioritize resource conservation and environmental protection. Due to the critical significance of soils in agriculture, several studies have focused on the concept of 'soil security', which parallels the notions of food, water, and energy security in relation to soils (McBratney and Field, 2015). The concept of soil security encompasses various related concepts, including soil conservation, soil care, soil quality, soil health, and soil protection (Koch et al., 2013, Morgan and McBratney, 2020). It is crucial to recognize that achieving soil security requires addressing the influence of human behavior (Napier, 2010). Consequently, several studies have explored the factors that drive farmers' motivation to adopt soil conservation and restoration practices.

For instance, Prager and Posthumus (2010) distinguished between the following three pathways for the adoption of soil conservation practices by farmers: (1) an individual adopts a practice on their own initiative, (2) an individual enrolls in a soil conservation program and receives incentive payments, and (3) an individual complies with legislation requirements. Importantly, the first path represents an intrinsic motivation of an individual (Kaiser et al., 2017), whereas the second and third paths require extrinsic rules and incentives.

The goal of soil science education (SSE) is to elucidate the role of soil in human life and underscore the importance of soil conservation and sustainable land use (Muggler et al., 2006). It must be emphasized that soil science education has traditionally focused on psychomotor and cognitive learning, while giving relatively less attention to the motivational domain (Brevik et al., 2022a, Jelinski et al., 2020, Muggler, 2015).

Our hypothesis drew from extant knowledge regarding drivers of ecological behavior. Specifically, we posited that the soil conservation practices of farmers are contingent upon both their cognitive grasp of soil science and their motivational disposition toward soil. Thus, the objective of our study was to investigate the extent to which knowledge and motivation of farmers influence the enactment of soil conservation behavior.

Conclusions

The findings of the present study suggest that a comprehensive soil science education should encompass both motivational and cognitive components, to elicit behavioral changes that promote soil conservation. One effective strategy for achieving this is through methods that cultivate fascination with the subject of learning (Otto et al., 2020), which in the case of soil science is soil itself. This can be achieved through, for instance, artistic engagement and soil mapping (Hartemink et al., 2014) or storytelling and narratives (Brevik et al., 2022a) with a purpose to create a sense of wonder about the soil.

The results of this study highlight the complex interplay between farmers' connection to soil, their knowledge of soil science, and their soil conservation behavior. Specifically, it is evident that the successful implementation of soil conservation practices requires a balance between motivational and intellectual components, represented by connection to soil and soil science knowledge, respectively. These findings emphasize the significance of considering both motivational and cognitive factors in designing effective

interventions for promoting sustainable farming practices. Ultimately, this study highlights the need for a holistic approach to soil conservation behavior research that takes into account the multifaceted nature of farmers' motivational disposition toward soil and their knowledge of soil science.

Adapted from <https://doi-org.ez18.periodicos.capes.gov.br/10.1016/j.geoderma.2023.116583>

Question 1

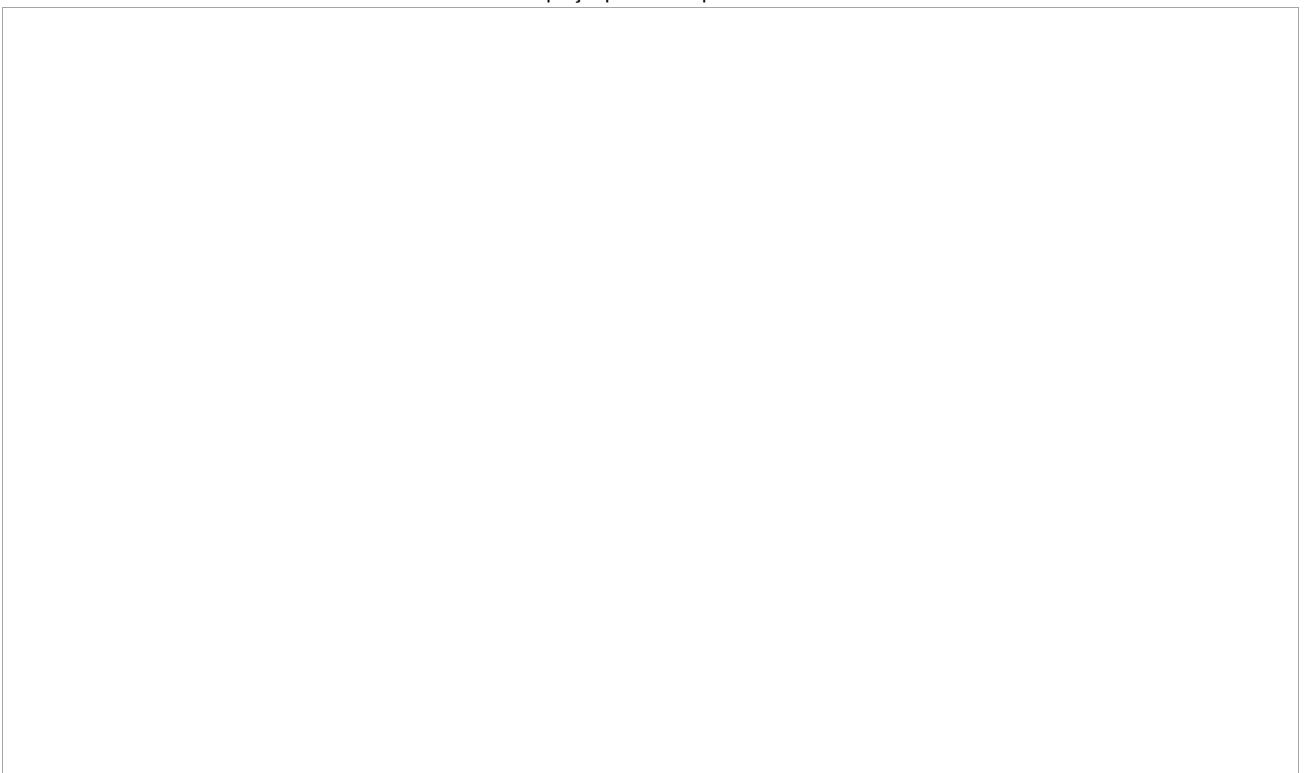
Based on the text, present the three alternatives that explain why farmers adopt soil conservation practices.

Espaço para Resposta

**Question 2**

Write about the concepts that encompass the concept of soil security and explain the reason why the authors characterize it as crucial.

Espaço para Resposta



Question 3

Write about the authors' goal for this research.

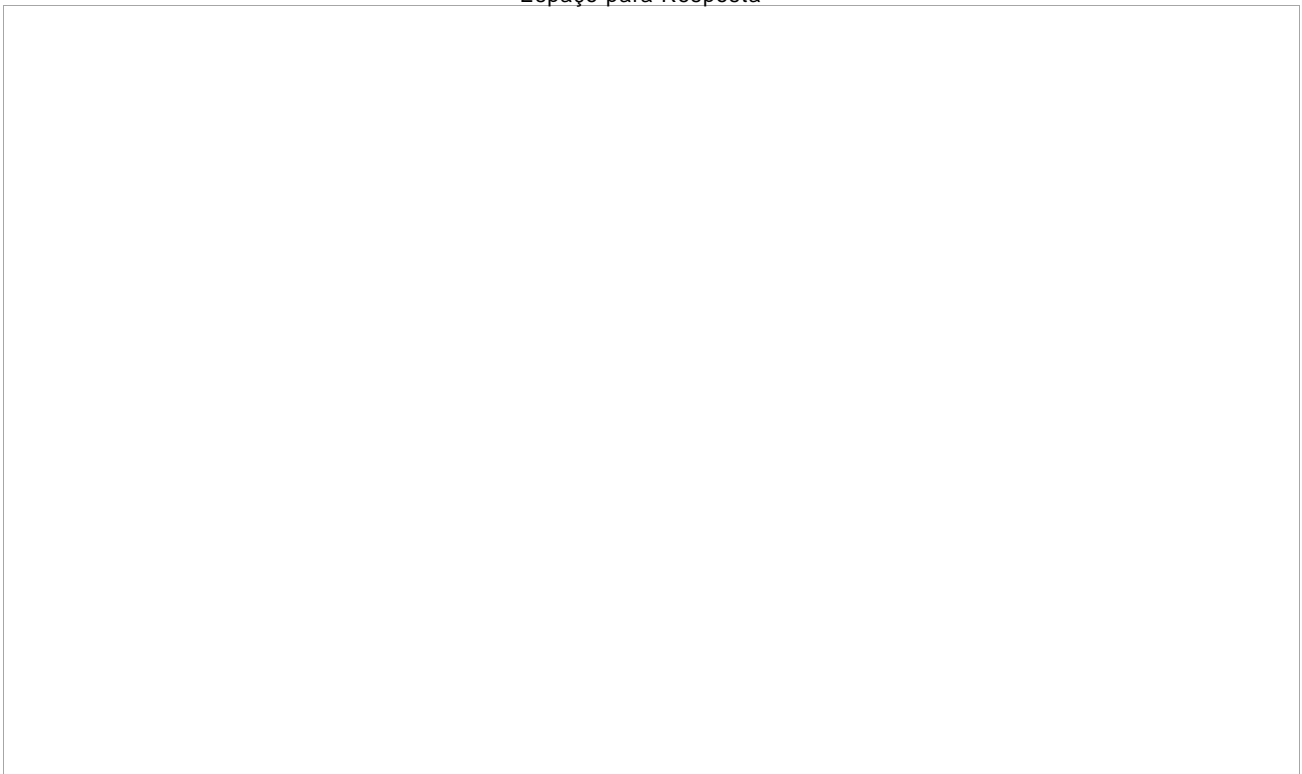
Espaço para Resposta



Question 4

Present the objective of soil science education (SSE) and the authors' discussion on what SSE traditionally focuses on.

Espaço para Resposta



Question 5

Translate the excerpt below. The translated text should be clear and accurate in terms of structure and meaning.

The results of this study highlight the complex interplay between farmers' connection to soil, their knowledge of soil science, and their soil conservation behavior. Specifically, it is evident that the successful implementation of soil conservation practices requires a balance between motivational and intellectual components, represented by connection to soil and soil science knowledge, respectively. These findings emphasize the significance of considering both motivational and cognitive factors in designing effective interventions for promoting sustainable farming practices.

Espaço para Resposta

