RESUMO SIMPLES - CAGR - CIÊNCIAS AGRÁRIAS

UNDERSTANDING THE INVOLVEMENT OF AGRO-INDUSTRIAL ENGINEERING STUDENTS IN A FOOD SECURITY INITIATIVE THROUGH DATA SCIENCE

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Given the current challenges of food security and the need to consolidate resilient production systems, it is essential that the training of future agro-industrial engineers integrates practical application components that link their technical skills with social commitment. In this context, the “Hidrospark” initiative emerged at the Universidad Nacional Mayor de San Marcos (UNMSM) in Lima (Peru) where a community of students from the Agroindustrial Engineering program voluntarily practice organic agriculture and hydroponics. The purpose of the research is to analyze the factors that influence the involvement of students of the Agroindustrial Engineering degree in this initiative. A structured survey was applied to 100 Agroindustrial Engineering students (UNMSM), of whom 33 were permanent members of the initiative. The questions covered

socioeconomic, academic, and emotional factors. The binary logistic regression method was used to identify the factors that influence participation; while correspondence analysis was used to understand the emotions linked to the activities of the initiative according to their level of involvement. The logistic model (Logverisimilitude=-47.58; accuracy=81%) indicated that the main factors influencing participation in the initiative are seniority at the university (ß=-0.4018; p=0.02), previous participation in volunteering (ß=1.1141; p=0.04) and being a member of a research group (ß=2.6711; p=0.00002). This indicates that a student with little seniority at the university, who has previously done volunteer work and is part of a research group is more likely to join the initiative. Correspondence analysis revealed that participation in the initiative is associated with positive attitudes, highlighting that students with a “high”, “medium” and “low” level of involvement stand out for feeling “proactive”, “collaborative”, and “calm”, respectively. These findings, in addition to helping understand the involvement in the Hidrospark initiative, could facilitate the replicability of the model in other universities, as a resilient strategy for the training of agro-industrial engineers with social awareness and commitment, capable of proposing practical solutions to the challenges of food insecurity and responding to the disruptions of today's world.

Palavras-chave: agro-industrial engineering; student participation; food security; logistic regression; hydroponics.