



Incorporating Creativity to the Technology Adoption Model Swine Agriculture Engineering for Agricultural use

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Abstract

(Abbai R et al., 2019) Environmental crises and widespread worries about the negative effects that traditional agricultural practises and agricultural activities have on the environment have led to a change in perspective on the need to adopt sustainable farming practises. In recent years, various agricultural practises, including precision agriculture, have been introduced to address environmental issues.(Abe A et al ., 2012) The goal of this study was to look at the elements that affect the attitudes and behavioural intentions of agricultural staff and consultants toward using precision agriculture technologies. The data from 183 agricultural consultants in Agricultural Engineering and Technical Consulting Services Companies was gathered using a survey inquiry and multistage random sampling. According on the findings of structural equation modelling, the province of Fars agricultural staff and consultants planned to employ precision agricultural technologies. Considering the outcomes The primary factor influencing experts' intentions to employ precision agriculture technologies is their behavioural attitude.(Abinaya ML et al., 2019) Additionally, individual inventiveness, confidence, perceived usability, and perceived simplicity of use of precision agricultural technologies affected behavioural intention to use as well as behavioural attitude. The findings have led to some useful recommendations for using these technologies in Iran (Afolayan G et al., 2019).

INTRODUCTION

(Anderson SN et al., 2019) There are three stages in the development of technology and three approaches to precision agriculture (PA). The first step uses intense mechanisation to lower the amount of worker input while still using conventional farming techniques. The creation of mapping methods, variable-rate technology devices, and an initial decision support system are all steps in the second phase. The development of wisdom-oriented technology is implied in step three. is founded on a traditional "high-input and high-output" strategy. has a strategy for "low input but steady output" and considers precision farming to be about "optimal input-output." With the onset of environmental crises and widespread concerns regarding the effects and side effects of some agricultural activities on the environment, the majority of studies and experts have identified a significant global

challenge, namely a movement toward environmentally friendly agriculture (Austin RS et al ., 2011). This is because they have observed that agriculture plays a significant role as a national independence focus and an effective foundation for the environmental balance. (Avni R et al., 2017) Consider sustainability and sustainable agriculture as successful management of agricultural resources to satisfy altering societal requirements, environmental conservation, and the expansion of biological resources in order to take action toward ecologically friendly agriculture. Conceptually, sustainable agriculture is a management method for effectively utilising resources to produce food for humans while also improving environmental quality and natural resource conservation. In a broad sense, sustainable agriculture is an understanding that depends on human objectives and his awareness of how agricultural operations affect the environment. In truth, sustainable agriculture emphasises the need to create agricultural products in

concert with the environment (Baumann K et al., 2020) not just with reference to nature. As a result, the production process will continue. The objectives of sustainable agriculture should include increasing production (for a constantly growing population), preventing soil erosion, reducing pesticide and fertiliser contamination, protecting biodiversity, and preserving natural resources, according to the general consensus among agricultural development practitioners in Iran. (Bukowski R et al., 2018) assets and enhancing wellbeing Why is precision farming necessary? The official reports of Iran's environment and natural resources are disappointing, according to recent studies. It should be emphasised that Iran ranks second globally in terms of erosion and depletion of fertilised lands and natural resources, behind Australia. This means that each acre has lost 33 tonnes of soil to erosion and destruction. The over use of chemical pesticides and fertilisers in the agricultural industry is one of the main causes. Additionally, the reports demonstrate that Iran uses much too many pesticides and artificial fertilisers (almost 3 tonnes per hectare). Primary costs of developing and modernising agriculture in Iran include pesticide pollution of waterways and transfer to the land and livestock, () contamination of food and animal feed, air pollution, and the over exploitation of natural resources. Agriculture's tendency to modernise has resulted in the removal of animals and the planting of traditional practises, hygiene risks, and employment loss. Also Iran is situated in an area that is both dry and semi-dry. Iran receives less than one-third (250 mm) of the 750 mm yearly average precipitation experienced worldwide. Given this climatic circumstance, numerous severe or minor droughts are unavoidable. Iran has undergone numerous droughts in recent years. Iran is currently experiencing a severe, protracted, and widespread drought that has impacted agricultural productivity and jeopardised the sustainability of water resources. This issue in Iran's agricultural growth has shown that the ability of traditional development techniques to support sustainable agricultural development is fundamentally constrained. In order to achieve sustainable agricultural development,

it therefore emphasises the creation of a new agricultural model. Therefore, it would seem that we should alter the conceptual pattern that dominates traditional agricultural systems and proceed toward the development of sustainable farming systems (Chandra AK et al., 2020).

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