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Azna Region Farmers' Perception of High-Risk Agriculture (A Grounded Theory)

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EXTENDED ABSTRACT

INTRODUCTION

Today, one of the prerequisites for sustainable development is the strengthening of the agricultural sector. Sustainable development requires the intelligent use of resources, especially in the area of the environment, because sustainable development is concerned about the pressures of modern and industrial life on the planet, the environment and the life of human societies (Babazadeh and colleagues, 1397). The agricultural sector is directly related to environmental resources; Therefore, there is a close relationship between agriculture and sustainable development. This is because today the world is involved with many environmental issues. The agricultural sector in the world has been subjected to serious environmental crises due to the transition from traditional to conventional today. Climate changes, droughts, floods, changing the use of agricultural land, excessive use of chemical fertilizers, genetic modification of agricultural products and lack of food security are some of these issues. While the technological changes in agriculture promised positive changes, mankind has faced crises such as the emergence of new pests, diseases and weeds, severe soil erosion and destruction, diseases such as cancer and environmental destruction. (Shafiei et al., 2018); As far as today, ecological agriculture is suggested as a prescription for improving agriculture (Brandt, 2007; Singh et al., 2012). Conventional agriculture, as a style of agriculture that is based on mechanization and extensive use of fertilizers and chemical pesticides, has replaced the traditional and subsistence agriculture that dominated agriculture before. In subsistence and traditional agriculture, the purpose of agriculture was to provide the daily subsistence needs of the family;

Therefore, the daily needs of the household have been determining the type and quantity of the crop and even the cultivated area, which due to the limited needs of the family, there was no need to produce a crop on a large scale, but in today's conventional agriculture, the production of more products to meet the needs of the market is a priority, so it naturally has different consequences compared to traditional agriculture.

As the field of this research, Azna city is one of the cities of Lorestan province. The livelihood of all the villagers and even many people living in the city depends on agriculture. In general, this city is made up of two cultural and climatic-agricultural districts, Japelaq and Pachelak.

The agriculture of Azna city has been affected by modern agricultural developments in recent decades, and naturally, the use of various agricultural technologies and chemical inputs has become part of the necessary action of farmers. The challenge of fertilizers and poisons is one of the challenges that the field of research has faced and this research seeks to qualitatively explore how to face this phenomenon. For this purpose, it examines the perception of farmers as micro-level activists on how and how much chemical fertilizers and poisons are used and how the middle and macro levels are formed in their mentality. Limited researches (Einali et al., 2015; Athari and Sedighi, 2015) have been done in the field of farmers' perception of conventional agriculture. Based on this, the present research aims to fill this gap, and its main goal is to investigate the perception of farmers. from conventional agriculture by using grounded theory.

METHODOLOGY

In this research, the qualitative approach and the systematic grounded theory of Strauss and Corbin (2014) were used to understand farmers' interpretation and perception of ecological habits. The reason for using the systematic approach is that it is more systematic and more applicable for understanding social processes, and this approach is used more in the world. While in other approaches such as the constructivist approach of Charms, the researcher's interpretation and role is more important compared to the participant's interpretation and role. A semi-structured interview technique was used to collect information.

The participants of the research included 33 farmers in Pachelek and Japulagh areas of Azna. The selection of farmers was based on the criteria of the farmer's identity, amount of land, area of residence, social position, type of cultivation (rainfed, rainfed, wet and dry) and agricultural history. The sampling method is of a purposeful type in which the maximum

diversity strategy is used, the logic governing this method and strategy is largely compatible with theoretical sampling. Concepts were the researcher's guide in selecting the participants. In fact, since the unit of analysis in the grounded theory is the concept, they say how the participants are selected. Therefore, by sampling the concepts, the participants were selected in which theoretical sampling took place. Therefore, the best targeted strategy among the ten strategies, sampling strategy with maximum diversity was chosen.

Sampling continued until the theoretical saturation level; That is, as long as the interview data does not add new information to the research. Various criteria were considered for theoretical saturation. First, the data was tried to be full of details as much as possible so that the new data does not add new content to the previous content. The next criterion was that the new categories that we obtained were tried to sufficiently confirm the findings; This means that with the statements of several participants, it cannot be accepted that the category has been confirmed; Rather, we must have enough evidence to confirm the desired category, this is also true for dimensions and features. Another problem in theoretical saturation is related to the relationships between the categories and their explanatory power, which was identified in the axial coding stage and led to the drawing of the paradigmatic model. The last thing that was considered in relation to theoretical saturation was the data support of the core category. In this research, the data fully supports the core category. According to such assumptions, theoretical saturation was done.

Coding in this research was used in the three stages of Strauss and Corbin's (2013) grounded theory strategy; These three stages included open coding, central coding and selective coding. In fact, each proposition is given a conceptual label, and a set of concepts is labeled with a larger label called a core category, and finally, all categories are given a general label called a core category.

CONCLUSION

The concept of high-risk agriculture is inspired by the keyword risk in Ulrich Beck's theory of risky society. The danger of the agricultural field is one of the many dangers of the modern world, which has been formed with the development of science and technology. High-risk agriculture is considered as a phenomenon emerging from the context of conventional agriculture; This means that causal conditions, contextual conditions and intervening conditions have turned agriculture into a risky activity. Another reason for choosing the category of high-risk agriculture is to represent the depth of the disaster in the agricultural field. In this field, the economy, health, environment and society have been affected at the same time and

have caused destructive effects; Therefore, in the conclusion section, the storyline of high-risk agriculture will be discussed.

Environmental sociology theories have dealt with the relationship between man and nature and the effect of human intervention on nature. In these theories, the increase of human intervention in nature has brought irreparable consequences. One of them is Ulrich Beck's theory of risky society. In this theory, Beck refers to the transition from industrial society (first modernity) to risky society (reflexive modernity); According to Beck, risk is formed according to a certain combination of awareness and ignorance (Beck, 2000). The growth of knowledge has a contradictory effect on industrial development. On the one hand, this growth leads to the prosperity of the industry, and on the other hand, it brings risks in various fields. One of these fields is agriculture. Technological innovations in the field of agriculture, such as genetic modification and industrial agriculture, cause these risks. Therefore, agriculture is not spared from the consequences of the risky society (Katalova et al., 2016).

The systems of modern society are involved in the complexity-stability trade-off. This means that the institutions of the industrial society create risks that they are not able to control them (Beck, 2000). Therefore, in the transition to an industrial society, structural pressure on agriculture and the risks created are inevitable.

With the transition to an industrial society, various sectors of society, including agriculture, have undergone serious changes, and some of these changes have led to crises. The transition from traditional to conventional agriculture as an agricultural style that is based on mechanization and extensive use of fertilizers and chemical pesticides; Although it has been associated with positive events such as the increase in production and the comfort and convenience of farmers, but due to the indiscriminate use of fertilizers and poisons in order to increase performance and satisfy the taste of consumers, it has created risks for the society and The environment has followed. In the community dimension, due to the chemical structure of conventional agricultural products and the lack of production of healthy and organic products, the health of its members is under the shadow of these inputs, and in the environment dimension; Water and soil pollution, soil erosion and the destruction of the animal and plant cycle have created serious crises for the ecosystem; While sustainable development requires rational and correct use of natural resources in order to preserve them for future generations. The negative effects of using chemicals in agriculture can be one of the main obstacles to sustainable development. In fact, the

pressure cycle mechanism forces the farmer to plant the land every year in order to increase his income, which results in the reduction of the yield of the land and the production of low-quality products. is forced to use fertilizers and poisons, which have negative consequences for society and the environment. Farmers, as producers of agricultural products, are influenced by consumers' tastes; Because if they do not pay attention to the needs and tastes of consumers, they will lose the market for selling their agricultural products; Based on this, the predominance of form over content, in the taste of consumers, leads farmers to produce marketable products.

In the meantime, the weak supervision of the institutions in charge of agriculture, such as the Agricultural Jihad Organization, on the manner and extent of using chemical fertilizers and poisons, has provided the basis for the increase in the consumption of these inputs. Another reason for this is the reduction in the quality of these inputs. Because this reduces the effectiveness of inputs and forces farmers to use more of them. Today, the use of fertilizers and poisons has gained double importance in the role of supporting farmers in the production of agricultural products, as farmers' reliance on these inputs, along with the gap in their knowledge and practice, has led to the excessive consumption of these inputs. In this research, a kind of gap was observed between the knowledge and practice of farmers in the use of chemical fertilizers and poisons, and it seems that the cycle of pressure plays a decisive role in pushing farmers to use these inputs as much as possible.

According to the causal, contextual and intervening conditions, a kind of external pressure on farmers leads to the adoption of behavioral strategies appropriate to the structure. Farmers' strategy is excessive use of chemical fertilizers and poisons. Because gradually over time, chemical inputs such as fertilizers have become a support for them and despite being aware of the disadvantages of these inputs, they are forced to use them to adapt to structural pressures. In the meantime, weak supervision by the responsible institutions and the reduction in the quality of chemical fertilizers and poisons have provided a suitable platform for their greater use of chemical inputs. Risky agriculture has led to the adoption of this behavioral strategy; Because farmers try to create strategies of the same type of risks in adapting to modern agricultural risks. While the adoption of the mentioned strategies leads to consequences.

According to the results of the present research, from the thematic aspect, investigating the causes and factors of the gap between knowledge and practice in the use of chemical inputs can provide important insights to fill this gap. Also, the genealogy of chemical fertilizer and poison consumption patterns among farmers and the factors affecting them can be useful in

making policies for the agricultural system. In terms of policy-making, there should be trainings in the form of workshops, mass media programs and newspaper articles in order to recognize the quality of chemical fertilizers and poisons by responsible organizations such as Jihad Department. Agriculture, Environmental Protection Organization, Natural Resources and Watershed Organization, etc., should be implemented; Because according to the results of the current research, the use of chemical fertilizers and poisons is inevitable and the responsible organizations should take steps towards the optimal use of these inputs.

Organic agriculture is proposed as a solution to replace conventional agriculture. But due to the higher productivity and efficiency of conventional agriculture, it cannot completely replace this type of agriculture. Because due to the increase in population and market needs, the volume of organic farming products does not meet the needs of consumers. But the responsible institutions should make more investments in this field and in order to change the tastes of consumers, they should conduct trainings and advertisements in order to encourage them to consume more organic products. Finally, the existence of conventional agriculture next to organic agriculture and the balance between these two types of agriculture can be a step towards the sustainability of the agricultural system and less damage to the environment, and as a result, achieving the goals of sustainable development.

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