



The Role Of Indigenous Knowledge In Increasing Rural People Knowledge About Agriculture

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ABSTRACT

Our today's world is the contradictions and collision's world. Contradiction between cultures, religions, different societies and countries. In recently years, from Renaissance till now, as much as human had developed, they also had contradictions and collisions in their world. One of these contradictions is the contrast between tradition and modernism. Maybe we can find these contrast roots in colonial era, the time when colonists promote their innovation in their colonies. Mostly these techniques and innovations show their native knowledge and the way of their living is foolish and inefficient and tried to enter industrial ways in to their life to increase production efficiency through this way. Thus the way of their living which was been formed during thousands of years has gone to be forgotten little by little. We can say, agriculture part is bearing the most damage in this rapid industrialization process. Absolving old and compatible ways in agriculture part and replacing and using of implant, harvest patterns without any proportions with environment has caused decrease of production efficiency, soil erosion and hard destruction of environment during a long time. Finally, at the end of the 20th century decades, some solutions were suggested to solve these inconsistencies and problems. So the importance of native knowledge and effort in compilation of that with modern knowledge were considered and it was tried to make general and stable view in relation with environment and the way of living through this way.

Key words: Indigenous Knowledge, Rural, Agriculture.

Introduction

Different definitions were presented about indigenous knowledge by experts that each of them present their idea about this knowledge from their viewpoint. Each of them emphasis on a special aspect of indigenous knowledge according to their viewpoint. Oxford vocabulary define the word indigenous knowledge such this" it is created naturally in a region which is related to the people of that region. [1]. Indigenous knowledge is a knowledge that has been grown in a long time and has transferred from one generation to other generation in hereditary form [12]. Williams and Molina have defined indigenous knowledge such this: indigenous knowledge is the learning methods, understanding and attitude to the world which is the result of experience and solving problems according to test and error by the people who are active and have used their available resources on its suitable time. Chambers with emphasizing on people's role in development process, believed that the phrase rural people's knowledge is more sensible than the other phrase such ethnic ecology, ethnographic knowledge,

ethnic classification. He also believed that indigenous knowledge is a knowledge that is created naturally and is emanated from geographical circle. [6].

During 1950 and 1960 decades, native (indigenous) knowledge was an inefficiency and absolute barrier for development. Nevertheless, now indigenous knowledge is recognized as a basic source. Indeed this knowledge was an answer to failure of great developmental theories by great countries and it was as a technical oriented solution for changing most peasants and farmers view in the world.

The lack of indigenous knowledge about indigenous practices in many technologies in the developing countries will lead to failure. So attention to indigenous knowledge as a knowledge that is result of many thousand years experience is important in development of villages. Rural benefactors, the people who had communion in development of villages, can take efficient steps in rural development if they pay attention in the process of rural schematization for its development. Indigenous knowledge has different aspects, such as

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hygiene and treatment, medical plants, linguistics, livestock and agriculture, art and mystery and unprofessional things [7].

Advantage Of Indigenous Agriculture:

It is more than one hundred century that is passed from anthropologist studies in farming societies and production systems and during the last thirty years, comprehensive reports were obtained of subsistence practices. These reports consist of important information about social relations of production, operational practices and environmental protection that includes indigenous methods for using of earth and rural people's encounter with their environment [28].

These studies have given new dimension to agriculture research. Now, in many countries the managers of agriculture resources are the people who are trained in western countries. So if the manager become familiar with the culture and environment roots of indigenous system of resource management, they won't do mistake. Indigenous agriculture is based on cooperation of farmer with nature. Recently researchers of ecological agriculture have more attention to these systems. The result of these studies is important from two sides:

- 1- At the first, in the process of agriculture renovation in the third world that is indeed unavoidable, the indigenous agriculture knowledge and local methods in management of agriculture resources is to be destroyed and simultaneity environmental regions are on the verge of destruction. Modern agriculture prefers huge profit from resources and didn't pay attention to environmental, cultural, social and economic varieties of traditional agriculture. So incongruities of agriculture development plans are not compatible with rural needs and talents and also rural conditions. By recognizing indigenous agriculture features such as traditional classification for identifying plant and animal species and using of indigenous practices like simultaneous cultivation of compatible crops, we can get useful information about suitable ways for agriculture. Surely these guidelines will be more compatible with rural needs and agriculture and environmental features of each region and won't be reckless to social, economic and environmental complex issues [26].
- 2- Second, with studying indigenous agriculture we can get points that will help us to design the same systems in industrial countries. Sustainable agriculture which is taken from indigenous systems will remedy the shortcoming of modern agriculture. In a single-product of modern farm, life circles of nature has changed by using chemical poison that give no chance for using principles of ecological agriculture. But completeness (evolution) of

culture and environment is the result of local agricultural systems [25]. In indigenous agriculture, variety and alternation of cultivation make minimize the possibility of farming products destruction. Although these systems have resources limitation, but they use of learning advantage and intellectual ways for use of animals, soil and compatible farm species. For this reason, researchers of ecological agriculture know these systems as unexampled kinds to specify constant static scales for agriculture activities. In industrial countries they use of these scales for designing and managing ecological production systems.

With all the advantage we account for native knowledge we should contemplate that for reaching a balanced understanding of this knowledge, we shouldn't indicate it very important or not very unmeaning as Chambers say. Also we shouldn't consider rural people an intellectual people. Because they can make mistake like any other people or group. And also this knowledge is not reliable forever. In some places this knowledge is combined with some superstition believes and we should not forget its spiritual and mental aspect [23].

Compilation Of Native And Modern Knowledge:

Many experts believe that for making a sustainable development, native and modern knowledge should be combined. Nowadays, so much efforts have done to make use of native knowledge but main part of these efforts were done for derivation and making it scientific [27].

Amiri Ardakani and Shah vali [3] believe that the undesirable outcomes of development on people and rural environment is the result of using new science by scientist, so by blending and making relation between modern and native knowledge we can solve this problem.

Millar believe that by combining native and modern knowledge we can make trust between researchers and rural people, because by using this way researchers and rural people know themselves as a partner that are responsible for a common process and product. Millar believe that the trust is the reason for future development [21].

Experts believe that there is no way to reach sustainable development except to combine native and modern knowledge.

Native and modern knowledge will complicate when:

- 1- We solve structural barriers such as political, economical, cultural and social difficulties.
- 2- We correct the thoughts on educational systems by emphasizing on learning and thought process and also correct the thoughts on research systems by emphasizing on audience and beneficiaries needs.

- 3- We solve communication barriers that cause inactivity on relation process and steady and dynamic flow of knowledge between peasants, experts and scholars. [10].

Making Native Knowledge Scientific And Making Modern Knowledge Native:

Nowadays, making scientific native knowledge in agriculture had devoted important part of native knowledge researches to itself. Creation forestry cultivation system which is taken from indigenous exploitation pattern in forested region is the result of making scientific native knowledge. Stimulus cultivation of fruit trees with other production was usual by farmers in developing countries from one hundred years before [20].

Environmental problems because of forest destruction, made scientist interested to use of forestry's methods and ways and forced them to make these ways scientific. Scientist had specified the physical and biological compatibility between different species and it is output according to laboratory studies and has identified compatible trees and productions. Then they supplied package sets by new title such as forestry cultivation, multi-cultivation and ecological agriculture systems and give them to farmers in commercial and formulated packages. Making native knowledge scientific is meaning to find its efficiency scientific reasons. In the process of making native knowledge scientific, most of the experts and researchers are not aware of cultural aspects of ways and native methods. If derivation of native knowledge and making it scientific was without attention to cultural aspects and governing values on indigenous society, it couldn't be acceptable among native people.

Experiences show that native people would not accept methods which are not compatible with their belief and needs even if it had had scientific bank roll [11].

Results and Discussions

In today's condition for making sustainable development we should combine native and modern knowledge. Today, so many efforts were done for applying native knowledge but the main part of this effort was for derivation and making it scientific. So, we should provide a condition for operative and scientific compilation of this knowledge with modern knowledge instead of packing and making it scientific. Today, experts from all over the world are reaching to use of this knowledge again and they have accepted the second use of this knowledge in sustainable development provisionally. The condition for accepting this knowledge is to remove negation aspects of native knowledge and specifying correlate native knowledge, evolution the constancy of this knowledge and improve it and applying developed

native knowledge in native environment. In other word in Sustainability development, the native knowledge should be a compilation of these two knowledge according to mentioned instances.

Finally native knowledge as a constant structure, with many years experience could attain a deep understanding and insight of the environment and ecologic exchanges. This knowledge is conveyed to next generation and the next conveyed it to their children. Native knowledge is on the verge of destruction like a curative prescription that has hidden a constant glamour on it. By dying each native person, the great treasury of knowledge will lay underground and these knowledge sources are destroying very speedily.

In the past half century, modern knowledge has provided new and modern technologies in agriculture that has caused a main evolution in production process. Also this technology has caused problems in environment, production and social aspects and has forced thinkers and deciders to think about them carefully. One of the ways to solve these problems is that to use of our ancestor's tentative knowledge. Using of our ancestor's knowledge and experience is called native knowledge and this provide an opportunity to use of local knowledge in the process of specifying needs and designing suitable technologies and applying it. The native and modern knowledge not only are not in contrast with each other but also are each other's supplement to reach a sustainable development and we can use of them in our needed technologies. Believe of educated people to native people and their knowledge "precondition for making them close" is called combination and compilation. Making evolution in modern system for attention to tentative knowledge is the main necessity for this compilation. Another necessity for this evolution is the researcher's attention to experimental accumulated wisdom and historical exploit by using qualitative and communion methods. Also applying compilation methods and making evolution among government, educational centers, farmers and peasant is the necessity and pre condition for combination of modern and native knowledge.

On the research which was done by Bozarjomhari [4] with this title "analyzing native knowledge position on rural sustainable development". It was specified that although there are many differences between native and modern knowledge but they are not in contrast with each other, because they are each other's supplement and we can't be success when we use them separately. According to new parameters in rural development, for solving rural problems, at the first we should use of native solutions and if it was not efficient, we can use and test external solutions.

Research findings which was done by Emadi and Amiri [10] with this title " compilation of native and modern knowledge is necessary for reaching agriculture sustainable development" signify that The

believe of educated people to native people and their knowledge " precondition for making them close" is called combination and compilation. Making evolution in modern system for attention to tentative knowledge is the main necessity for this compilation. Another necessity for this evolution is the researcher's attention to experimental accumulated wisdom and historical exploit by using qualitative and communion methods. Also applying compilation methods and making evolution among government, educational centers, farmers and peasant is the necessity and pre condition for combination of modern and native knowledge.

Research findings that was done by Karimi with this title " native knowledge in development process" signify that native knowledge was a essential element and important source for realization of sustainable development, poverty reduction, making local people capable and motivate them to participate in activities for agriculture and rural development, developing and product suitable technology, rural society's self-reliance and self sufficiency. For this reason all side's try, partnership and protection for record and registration, compatibility, distribution and promotion, exchange of this resources and also suitable and scientific guidelines for compilation of this knowledge with new knowledge and rural and agricultural development plans are needed.

Although native and modern knowledge are different from each other in their nature and usage, but it doesn't mean that they are in contrast with each other. Experience shows that not only native and modern knowledge are not in contrast with each other, but also they are suitable supplement in agriculture and rural development for providing developmental needs.

References

1. Azkia, M. and A. Imani, 2008. Sustainable Rural Development - Publications Information, Tehran.
2. Eshraghi, G., 2000. Indigenous Knowledge and Development Planning, Journal of Forest and Rangeland, No. 40, Forest, Rangeland and Watershed country.
3. Amiri Ardekani, M. and M. Shahvali, 2003. Principles, concepts and indigenous knowledge Agriculture "series of publications and development of villages No. 34, Second Edition.
4. Bouzarjmehri, Kh., 2004. indigenous farming knowledge of gender and its role in Rural Development and Research, Centre of Quarterly Tehran University Women (Women's Research).
5. Popzan, A., 2002. Design and compilation of indigenous knowledge, modern media in order to achieve a partnership approach in Kermanshah province - end of period letter PhD Tehran University Faculty of Agriculture to help Azkia and Seyed Mahmoud Hosseini.
6. Chambers, 2000. Robert - rural development, priority part to the poor (supporting vulnerable groups), translated by Mustafa Azkia, Tehran University Press.
7. Farrokhi, S. and J. Yaghoubi, 2002. technology development through indigenous knowledge systems with agricultural research - Journal of Jihad, 224-225.
8. Zare, H. and J. Yaghoubi, 2003. Attitude to the indigenous knowledge - Journal of jihad, 231-230.
9. Razavi, M., 1999. Agriculture and natural resources, indigenous knowledge and combining it with modern knowledge, Jihad magazine, twenty-five years, 269.
10. Emadi, M. and M. Amiri Ardekani, 2004. combining indigenous knowledge and formal knowledge, necessary to achieve sustainable development of Agriculture-Rural Development Publication, 54.
11. Emadi, M. and E. Abbasi, 2001. indigenous knowledge and sustainable development of villages, the old view of a new zone, and development of village's, 33.
12. Karami, R. and Kh. Moradi, 2003. The place of research, training and promoting the preservation of indigenous knowledge, Journal of Jihad, 255.
13. Nowroozi, A. and E. Alagha, 2000. A new category of indigenous knowledge in rural development research - Journal of jihad, 223-222.
14. Brouwer, Jan., 1998. IK, IKS and ITK. Indigenous knowledge and Development Monitor, 6(3): 13.
15. Gigler, S. *et al.*, 2003. ICT for Indigenous Development. Available at: [http:// topics.Developmentgateway.org/ ict/ sdm/ preview Document](http://topics.Developmentgateway.org/ict/sdm/previewDocument). Do ~ active Document Id.
16. Merrewij, A.V., 1998. Three definitions of indigenous knowledge. Indigenous knowledge and Development Monitor, 6(3): 13.
17. Box, L., 1999. for the fun of it, Guest Column, Indigenous knowledge and Development Monitor, 792: 36.
18. Kolawople, D., 2001. Local Knowledge Utilization and Sustainable rural development in the 21 St. Centuries, IK Monitor Article, 9-1.
19. Dewes, W., 1998. Introduction, P. 3in traditional knowledge and sustainable in S. H. Davis and K. Ebbe (Eds) Proceedings of a conference held at the World Bank Washington, D.C, sept. 27-28. Environmentally Sustainable proceeding series, 4.
20. Louise, G., 2000. Working with indigenous knowledge (A guide for researchers), published by the International Development research Centre, po Box 8500 Ottawa. On, Canada K1G 3H9.

21. Penny R.A., 2001. Gender and Indigenous Knowledge, IK&D M, Article, 9-1.
22. Rajasekaran, B.D.D., M. Warren and S.C. Babu, 1996. Indigenous natural-resource management system for sustainable agricultural development-a global perspective *Journal of International Development*, 3(4).
23. Warren, D.M., 1999. The role of indigenous Knowledge and biotechnology in sustainable agricultural development A Keynote Address presented at Southwestern Nigerian Regional Workshop on indigenous knowledge and Biotechnology, Obafemi Awolowo university, Ife- Ife, OsunState, Nigeria, 30 July.
24. Agrawal. A., 2002. Dismantling the Divide between Indigenous and scientific knowledge "Development and change, 26(3).
25. Ahmed, M., 2000. Indigenous Knowledge for Sustainable Development in the Sudan. Khartoum, Sudan. Khartoum University Press.
26. Appleton, H. and A. Jeans, 1995. Technology from the People: Technology Transfer and Indigenous Knowledge ."Science, Technology and Development.
27. Burger, J., 1997. The Gaia Atlas of First Peoples: A Future for the Indigenous World, Penguin Books, and Ringwood.
28. Smita, M., 2003. Women's indigenous knowledge of forest management in Orissa, <http://www.gendermainstreamingasia.org/img/b1.PDF>