

## The importance of indigenous knowledge in agricultural development

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**Abstract:** 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. 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 . 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.

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### Introduction:

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 20<sup>th</sup> 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 (popzan, 2002).

On the other hand, the colonist countries attention to industrial productions and agriculture policies has caused to promote industrial and single product agriculture which will influence the native farmer's knowledge about different productions and will make it inconspicuous. Also, colonized plans and imported extension programs have intensified the alienation of native knowledge (Nowroozi and Alagha, 2000). In the middle of 1980 decade, there was a new view" giving priority to farmer" that increased the attention to native knowledge. This view that emphasized on "listen people and learn of them" emphasized on people's active communion on developing and searching process. Before using of this way, understanding rural society's culture was in another way and it was thought that rural people have failed

in economic, politic, innovation and its transfer, creation of knowledge and using of that in rural societies. Before representation of this attitude "giving priority to farmer", it was thought that development need in other people management who are not living on that village. But in this way, we look rural people as the one who are able to solve their problems with relying on their knowledge and experience (Eshraghi, 2000).

Indigenous agriculture is base on farmer's cooperation with nature. Sustainable agriculture that inspired by indigenous systems would rectify most of deficiencies of modern agriculture. Indigenous agriculture systems is production of centuries of cultural and subsistence revolution. These systems are collections of farmer's experiences that haven't enjoy sources except inputs, capital and indigenous knowledge. And consequently they accessed to such sustainable agriculture that just is dependent on using restricted local resources and existing humane and animal power. At indigenous agriculture, culture diversity and frequency would minimize possibility of loss crops in spite of simple technology. These systems despite of limitation of sources enjoy merits of sponsors traditions and intelligent methods of using animals, fields, and compatible crop species. Thus ecological agriculture scholars consider these systems as unique samples to determine sustainability standards in agricultures activities (Penny, 2001).

This knowledge would rise at different fields such as language, botanical and zoology and also skills and manual and agriculture professions that all are

product of human efforts in his environment. This information contain best, useful and consistent collocation of exploiting methods and living in special environment which be transmitted through verbal and empirical way from one generation to another (Smita, 2003).

unlike development that is dependent on using maximum of natural sources in order to current generation's access to maximum economic growth and income , sustainable development insists on supplying current generation's needs without jeopardizing next generation's facilities for supplying their needs. Policy making is impossible and unacceptable with no program that leads to starvation, poverty, social inequality and environment pollution at cities and villages and finally to ecologic devastation. In contrast, kind of development is acceptable that leads to continues improvement of life quality for all global society and next generations. Accessing to this goal is possible just through protecting natural sources and sustainable use of these sources.

Accessing to indigenous knowledge would enforce primary foundation of sustainable development. On the on hand, indigenous knowledge is production of empirical learning process and at the other hand is test and error of few thousand years of one society in relation to its environment. It is obvious that this knowledge represents human's interaction with nature and displays features of climate and specifications of vegetarian and animal nature of one region and more important , it displays their interactions with human(Kolawopole, 2001).

By possessing this valuable information it is possible to predict its component relations , and it is possible to use of its latent power intelligently so that both balance be preserved and also human's needs be supplied.

At the other hand furthermore valuable latent information in indigenous knowledge, villager's epistemology would enforce relation between experts and local men. This issue is possible through deep analyzing of indigenous knowledge and familiarizing with local people's attitudes and epistemology and through that raft between men and experts would be restored. Everything is inter-related at village and intelligent rural people by considering accessible things in nature or easily is obtainable, would supply their needs (Box, 1999).

Broaching indigenous knowledge issue in order to presenting new approaches was reinforces in current decade which insists on human-oriented developing and sustaining. In this attitude, development process, environmental, social and cultural considerations, was considered important in addition to economic interests. Principle of sustainable development can be

summarized so that development should be consistent with desired society from aspects of sustainable environment, fair social aspect, and from economic efficiency and cultural viewpoint. Considering people's indigenous knowledge was emphasized directly or indirectly as one of the development needs, at most of forty principles of sustainable development charter. Considering indigenous knowledge means accepting variation principle and describes that all people share and participate at variation and culture richness and they create common human's heritage. Sustainable development would not be able to be success without identifying people's indigenous knowledge, role and its position and also without protecting knowledge and indigenous people's rights, because indigenous knowledge has most consistency with principle of sustainable development (Karami and Moradi, 2003). Necessity of attention to indigenous knowledge was appeared more due to failure of common development samples, especially at rural development, and being attracted to it to help formal knowledge was identified very critical. At the context of cooperative approach as new approach that is base on paradigms which forms concepts of development, focus on new revolution is emergence of new proficiency that is called indigenous knowledge. Cooperative approach is seeking to systematic use of indigenous knowledge at related researches to technologic actions.

According to different definitions of indigenous knowledge, it is possible to count it as part of unique culture of each ecosystem or country and that is knowledge and findings which obtained through experience in order to be consistent with certain ecosystem conditions, and changed as part of social and productive culture of that society over time. This acknowledges, represent compatibility methods with nature and establishing reasonable relationship between human and his environment. And has complete harmony with principle of sustainable development, form this viewpoint (Burger, 1997).

#### **Characters of indigenous knowledge :**

The characters of indigenous knowledge like the definition of this knowledge are presented by experts in different ways which we will explain about them as follow:

##### **1- it is based on experience:**

Indigenous knowledge is the result of people's experience during many centuries.

##### **2- it was tested during centuries by working on it.**

##### **3- it is compatible with indigenous environment and culture:**

Indigenous knowledge was created through native societies and it was formed according to their needs

and during time the things which were not compatible with indigenous environment were omitted, so what was remained was compatible with the environment and culture of that society (Amiri Ardekani and 2003).

**4- it is dynamic and is changing:**

Simultaneously with changing indigenous culture, the indigenous knowledge was changing too.

**5- the knowledge of rural people was not technical:**

This knowledge was consisted of rural people's wishes, values and preferences.

**6- the rural people's knowledge is not statistic:**

This knowledge was formed according to people's culture, social and economic history. The history which was written by these rural people shows that their manner and activities were efficient in changing of their conditions.

**7- rural people's knowledge is not enough.**

Maybe the rural people are knowledgeable but they like to know more and more. Because they want to be powerful in their discussions with political, economical and social forces who made these people poverty before give them technology (Zare and Yaghoubi, 2003).

**8- rural people's knowledge has root on their political economy and is more important in political field.**

The advantages that rural people can get from indigenous knowledge are the knowledge that is created and released locally and is on their authority and also depends on main factors in regional politic economy (land distribution, marketing relations, and vertical links and ...). So improvement of their livelihoods depends on interferences which were made to pervade on these main factors.

**9- most of the rural people are public-oriented**

Mostly, they have a little information about many things which is in contrast with academic educations. Specialist people in universities have deep knowledge in little fields (of course some of these native people are specialist too) (Razavi, 1999).

**10- indigenous knowledge systems are holist:**

Local people consider the other people's problems as their problems and try to solve these problems in a whole frame with using their knowledge.

**11- indigenous knowledge systems combine the culture and religious believes.**

Religious believes as a part of indigenous knowledge are not separated from technical knowledge and these believes effect on people' do and don't

**12- indigenous knowledge systems prefer the less risk to most profit**

Escaping of risk is important for native people, for example a native person usually keeps some goats for

possible cases such as disease of his children and he and he didn't expect any incomes of these cases.

**Conclusion:**

effort and national commitment and multi-dimensional support is very critical for recording, valuing, extending and exchanging this rich source and also preparing mechanism and practical strategy for synthesizing this knowledge with new knowledge and agricultural development programs.

Agricultural extension was identified as one powerful IT focused area, due to role variation at knowledge system and agriculture information at one hand and at the other hand due to its dependence on various exchanges among farmers, that can has great affect on rural society and developing agriculture. So that work and productions of farmers would increase by farmer's access and use of Internet and subsistence farmers at all over the world are at developing by gaining needed knowledge and information that during time would becoming as commercial producers. Transmitting from system-cycle source of agriculture to technology-cycle system of agriculture placed more responsibility on agricultural extension because agriculture extension system is as vital technology transfer crossing to farmers at one hand and as crossing for referring feedbacks, needs and agriculture issues, researchers and policy makers of market.

What that is obvious is that extending and researching agriculture can help to sustainability through close relation to farmers , attending to their experiences , gaining their information and logical understanding of agriculture activities , attending to their vital needs for doing "demand-base" researches and extension education efforts for developing agriculture , at process of improving agriculture development.

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.

On the research which was done by Bozarjomhari (2004) 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 (2004) 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.

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