

A STUDY ON INDIGENIOUS PRACTICES IN AGRICULTURE WITH SPECIAL REFERENCE TO KHANDESH REGION IN MAHARASHTRA

Atul N. Barekar¹

¹North Maharashtra University

Introduction

The beginning of sustainable agriculture in late eighties in Indian agricultural system has evoked interest on Indigenous Knowledge System (IKS) and Indigenous Technical Knowledge (ITK) together called as Indigenous Knowledge and Technology (IKT) that has the element of using natural products to solve the problems pertaining to agriculture and allied activities. From the primitive age the farmers are practicing the indigenous way of farming which has been recognized to be more eco-friendly and sustainable. Indigenous knowledge System is said to be most primitive knowledge which is been continuously adopted from generation to generation.

Thus, the available literature regarding the Indigenous Knowledge and its Practices give the evidence for using the natural inputs effectively in sustainable agricultural practices.

Objective of the study

The following are the objectives of researcher for the research work pointing toward Sustainable Agriculture Management.

- To study Indigenous Practices for managing agriculture in Khandesh region.
- To study the extension of indigenous practices for sustainable development.
- To study the reason behind gradual dismissal of indigenous business practices from the Khandesh region of Maharashtra.

Hypothesis of the Research:

According to the objectives of the research, the present research is exploring some of the hypothesis:

Hypothesis 1

- **H₀1:** The indigenous practices and Technology does not lead to sustainable growth.
- **H_A1:** Indigenous practices and Technology leads to sustainable growth.

Hypothesis 2

- **H₀2:** Government Schemes and subsidies have failed in attracting the farmers towards indigenous farming.
- **H_A2:** Government Schemes have not failed in attracting the indigenous farming.

Hypothesis Testing

Hypothesis 1:

H₀1: The indigenous practices and Technology does not lead to sustainable growth.

H_A1: Indigenous practices and Technology leads to sustainable growth.

Two-sample T for indigenous vs. technology

Means of Variation	N	Mean	StDev	SE Mean
Indigenous Practices	5	80.0	72.3	32
Modern Technology & Practices	5	131.4	44.3	20

Source: Calculated from Primary Data

Difference = μ (indigenous Practices) - μ (Modern technology)

Estimate for difference: -51.4000

95% CI for difference: (-138.8386, 36.0386)

T-Test of difference = 0 (vs not =): T-Value = -1.36 P-Value = 0.212 DF = 8

Here, p-value of this testing problem is 0.212 is greater than specified level of significance (0.05). So the researcher rejected the null hypothesis and accepted the alternative Hypothesis

Thus, indigenous practices and technology leads to sustainable growth. The researcher have taken the significance level at 5 percent (0.05), this implies that H_0 will be rejected when the sampling result (i.e observed result) has less than 0.05 probability of occurring if H_0 is true.

Hypothesis 2:

H_{02} : Government Schemes and subsidies have failed in attracting the farmers towards indigenous farming.

H_{A2} : Government Schemes have not failed in attracting the indigenous farming.

Chi-Square Test: government schemes, indigenous farming

Expected counts are printed below observed counts

Chi-Square contributions are printed below expected counts

	Government Schemes	Indigenous farm	Total
1	113	135	248
	137.54	110.46	
	4.378	5.450	
2	268	171	439
	243.46	195.54	
	2.473	3.079	
Total	381	306	687

Chi-Sq = 15.380, DF = 1, P-Value = 0.000

Chi-Sq = 15.380, DF = 1, P-Value = 0.000

Here, p-value of this testing problem is close to zero.

So, the researcher accepted the the null hypothesis.

Thus, government schemes have failed in attracting indigenous farming.

(i.e. government schemes and indigenous practices both are dependent)

Two variables i.e Government scheme and indigenous farming were added for expected counts. By adding these variables, the expected counts after observation was 687 and Chi-square contribution was 15.380 on one degree of freedom. At 5 percent level of significance the table value of $X^2 = 15.380$. Here, p-value of this testing problem is close to zero. It can be said that the government schemes and indigenous practices are dependent.

So, the researcher accepted the null hypothesis. Thus, it can be concluded that the government schemes and subsidies have failed in attracting indigenous farming.

Conclusions

Conclusions were made on the basis of several findings:

- Though the farmers own their farm land for cultivation but very few farmers have their land on the 7/12 extract. The family members has to claim for the right of land from forefather to father. This fragmentation or transfer of land goes on continuously reducing land holding from one generation to next generation leads to lower income.
- It wouldn't be possible for the farmers to adopt indigenous practices having a limited land and resources for the agricultural use in their farm.
- Agriculture related traditional implements existing in the local region of Khandesh region are diminishing gradually and at present it is difficult to get carpenter, blacksmith etc. at village level. The labour requirements for collecting indigenous raw materials and fabricating farm implements are rather high. Readymade goods are therefore on rampant in the market. Farmers too are not willing to purchase the Traditional material because of easy availability of modern implements having superior quality.
- Multiple growth of insurgent situation lead's to pathetic condition of farmers such as fragmentation of land, poverty etc. The study reveals the fact that the farmers don't have any economical back-up to sustain the recurrent losses from farming. They are always in need of financial assistance. No emphasis was given to equity and justice, ecological stability and environmental sustainability while considering the farmers welfare. Thus, Indigenous knowledge practiced by primitive farmers is diminishing gradually.

References

1. Swaminathan, M.S.1999.Agrochemicals in Sustainable Agriculture. In: Natural and manmade chemicals in sustainable agriculture in Asia (Ed. B.S. Parmar).
2. Barker, G. M. (1884) A Tea Planter's Life in Assam. Thacker, Spink & Co., Calcutta.
3. Behal, R. P. (2006) "Power Structure, Discipline, and Labour in Assam Tea Plantations under Colonial Rule", International Review of Social History, 51: 143-172.
4. Kothari C.R (2013) Research Methodology, New Age International (P) Ltd.New Delhi.
5. Centre for economic and social studies, working paper no. 81, January, 2010.
6. Chande, S. (1993). Developing a strategy for integrating indigenous knowledge system in the area of foods, nutrition and family welfare with formal research system. Paper Presented at the National Seminar on Indigenous Technologies for Sustainable Agriculture, New Delhi, March 23- 25.

7. Dubey, V.K, Naraina, G.S and Gupta, S.L.(1993). Methodologies for tapping and documenting indigenous technologies. Paper Presented at the National Seminar on Indigenous Technologies for Sustainable Agriculture, New Delhi, March 23-25.
8. Dhaliwal, G.S and Ramesh Arora. 1996. Principles of insect pest management. National Agricultural Technology Information Centre, Ludhiana.
9. Jean Dreze; Amartya Sen. (1995) Economic development and social responsibility, Oxford University Press, London.
10. Khader Khan, H. 1996. Integrated pest management and sustainable agriculture. Farmers and Parliament. 30 (2):15-17.
11. Karter, A. (1993). Indigenous learning in craft: a pilot research effort. Indigenous Knowledge and Development Monitor. Vol. 1, Issue 1, 21 -23.

