Abstract

The backbone of a Traditional/Local subsistence-based economy is agriculture. On the basis of topography, agro-ecology and their racial and cultural backgrounds, local farmers have adopted diverse (sometimes area and community specific) agricultural practices with their time-tested indigenous knowledge and technologies, and have integrated several related world view (spiritual) practices. The community living in the study village possesses knowledge about agriculture, pest management, soil fertilization, multiple cropping pattern, food preparation and so forth. They recognize both natural and super natural forces and agencies shaping human destiny and seek to utilize them for their benefits according to their needs. The paper presents some empirical data from the local farmers from Northern region of Maharashtra which highlights the community’s local agricultural knowledge.

I. INTRODUCTION

The current hyperbolic growth of agricultural production may rely on formal science, but it is built on foundations developed by traditional farmers. While the accomplishments of traditional knowledge are unquestioned, its characteristics pose severe obstacles for its valuation and protection by indigenous people and outside interests such as conservationists, indigenous rights activists, and rural development agencies. Indeed, outside efforts to value, promote, and protect traditional knowledge appear inevitably to distort it and its social context (Dove 1996). A severe obstacle to valuation and protection is the disarticulation of different types of knowledge when that information is local, orally transmitted, practical,
and fragmentary in distribution. Agricultural knowledge is comprised of numerous substantive domains - soil types, pests, pathogens, environmental conditions such as rainfall and temperature patterns, and crop genotypes – as well as management domains – irrigation techniques, soil amendments, planting patterns, pest control, weed control, and, crop selection to name a few. Brookfield (2001) adds organization as a third domain that includes tenure arrangements, resource allocation, and dependency on alternative production spheres. These domains are demarcated by distinct lexicons and nomenclatures such as crop variety names or terminology for management practices.

II. RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is necessary for the researcher to know not only the research methods but also the methodology. It is necessary to design a suitable methodology for understanding systematic and scientific study.it is about the best way to collect and organize data for individual research in order to achieve research objectives.Data from the primitive farmers have been collected in order to relieve facts which would fulfill the objectives for the research study. These three areas were discussed briefly in terms of questionnaire construction, face-to-face interviews and systematic sampling. Since the study requires intensive qualitative data, the following methodologies were used for collecting primary data and Secondary data:

Primary Data:
The researcher intends to collect the primary data by:

1. Observation:
Through observation data was collected as to know the farmers indigenous knowledge and its practices used by using natural resources for the agricultural purpose.

2. Questionnaire:
The data were collected from grass root level and exercised to collect maximum information directly from the farmers in Jalgaon, Dhule and Nandurbar district of Maharashtra. The questionnaires have been distribute and filled by farmers.

By using close-ended questions, the researcher knows the exactness in gathering data from the respondents. This happens because the respondent can answer in detail, so that the researcher can clarify and quantify the answers with many possible answers. Respondents may thus provide valuable information about complex issues. Some of the questions were discuss by the researcher which are pivotal for the research study.

III. OBJECTIVE OF THE STUDY

The following are the objectives of researcher for the research work pointing toward practicing local farming through indigenous technology.

1. To Review the local farming practices through indigenous technology used in farming in North region of Maharashtra (Jalgaon District).

2. To know the behavior of local farmers towards indigenous practices and technology.
IV. HYPOTHESIS OF THE RESEARCH

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

H1: Farmers in North region of Maharashtra are practicing indigenous farming.
Ho: Farmers in North region of Maharashtra are not practicing Indigenous farming.

V. ANALYSIS OF DATA

1. Farmers carried out Allied business vis-a-vis farming in North region of Maharashtra.

<table>
<thead>
<tr>
<th>Allied Business</th>
<th>Jalgaon</th>
<th>Dhule</th>
<th>Nandurbar</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Allied business</td>
<td>41%</td>
<td>21%</td>
<td>7%</td>
<td>21%</td>
</tr>
<tr>
<td>Poultry</td>
<td>5%</td>
<td>25%</td>
<td>47%</td>
<td>26%</td>
</tr>
<tr>
<td>Goat farming</td>
<td>6%</td>
<td>11%</td>
<td>29%</td>
<td>14%</td>
</tr>
<tr>
<td>Dairy</td>
<td>31%</td>
<td>31%</td>
<td>12%</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>17%</td>
<td>13%</td>
<td>6%</td>
<td>12%</td>
</tr>
<tr>
<td>Total Percentage</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Calculated from Primary Data

Information presented in table and fig reveals that 47% of respondents were found possessing poultry birds in Nandurbar District itself. The total percentage of respondents in Poultry farming and Dairy was about 26% each in North region. 12% of the respondents were not doing any allied business.

2. Agricultural Inputs used while adopting ancestor or indigenous type of Farming System.

<table>
<thead>
<tr>
<th>Source of I-Inputs</th>
<th>Jalgaon</th>
<th>Dhule</th>
<th>Nandurbar</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dholi (Bamboo wooden storage)</td>
<td>3%</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Manure</td>
<td>48%</td>
<td>40%</td>
<td>7%</td>
<td>34%</td>
</tr>
<tr>
<td>I-seeds</td>
<td>7%</td>
<td>4%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Other I-Inputs</td>
<td>13%</td>
<td>27%</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>Not using I-Inputs</td>
<td>29%</td>
<td>28%</td>
<td>86%</td>
<td>43%</td>
</tr>
<tr>
<td>Total Percentage</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Calculated from Primary Data

From the above table and fig, it reveals that 34% of respondents are using manures as bio-fertilizers in their farm as agricultural inputs. Accordingly, it reveals from the table, the essential implements like wooden ploughs, harrow and sprayers were possessed by only 18% of the respondents and 34% of respondents were not at all using any indigenous agriculture inputs in their farm respectively. Apart from this, very few respondents i.e 4% of respondents preserve the indigenous seeds for the next season.

H1: Farmers in North region are practicing indigenous farming.
Ho: Farmers in North region are not practicing Indigenous farming.

Table 3: Frequency of farmers in using indigenous inputs

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Type of Inputs</th>
<th>Frequency (No. of Occurrence)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dholi (Bamboo wooden storage)</td>
<td>20</td>
<td>3%</td>
</tr>
<tr>
<td>2.</td>
<td>Manure</td>
<td>340</td>
<td>59%</td>
</tr>
<tr>
<td>3.</td>
<td>I-seeds</td>
<td>40</td>
<td>7%</td>
</tr>
<tr>
<td>4.</td>
<td>Other I-Inputs</td>
<td>180</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Total No. respondents</td>
<td>580</td>
<td>58%</td>
</tr>
</tbody>
</table>

Source: Calculated from Primary Data

Total Number of Farmers (Number of respondents): 1000.
Number of farmers responded for using Indigenous Inputs: 558.
The percentage of Frequency: 58%

For determine the significant relationship in practicing the indigenous farming and using the indigenous inputs for agriculture purpose, the researcher calculated the frequency of respondents who were using Indigenous inputs. The interpretation from above table shows that, 58% of respondents are using Indigenous inputs.
The frequency of using Indigenous inputs i.e 58% among the total number of respondent (1000 respondents). Thus, it can prove that Farmers in North region are practicing indigenous farming but at a moderate rate.

VI. FINDINGS

1) It can be elucidated that, in North region almost 1/4\textsuperscript{th} of farmers (26 percent) were found possessing poultry farming and dairy in North region. As allied business is inevitable for the agriculture, a majority of respondents were not engaged in any allied business apart from agriculture. Researcher from the findings reveals that the farmers have least control on nature and the availability of water. Depending upon the behavior of monsoon was another constraints reported by the farmers. The poor monsoons have led to a deficit of 31% in rainfall, 22% fall in crop area and 20% drop in foodgrain production. Ten years of rainfall data shows a steadily declining trend, while forest cover is low (below 5%, according to government data). While the local administration has tried to convince farmers to consider using lesser water and alternative sources to groundwater (pumped over ground), there are dozens of farmers losing their entire earnings in this desperate hunt.

2) It was observed that majority of farmers (34 percent respondents) are using manures as bio-fertilizers in their farm as agricultural inputs. Accordingly, less than 1/4\textsuperscript{th} (18 \% of the respondents) of farmers are using the traditional in ther farm like wooden ploughs, harrow and sprayers. Few farmers (34 percent respondents) adopt modern practices; say for example chemical fertilizers. This compelled the farmers to accept whole package of modern practices, leaving behind the indigenous practices. Incorporation of
implements like Tifan (sowing harrow), ropes, bullock carts (iron made) made it common in the society. Cheap availability of farm implements results in diminishing traditional skill of blacksmith and carpenters. The research study also reveals that very few (4% respondents) farmers preserve the indigenous seeds for sowing purpose in the next season.

3) The interesting fact is that ‘When farmers on neighbouring fields used modern way of farming, then particular farmer had to adopt compulsorily modern means of agriculture inputs in their farm. Thus 44 percentages of the respondents were reported that only modern farming was only the most effective mode of farming. 42 % of respondents reported that both traditional and modern way of farming was beneficial for farming. Only 14 percent of respondents were in view to adopt only traditional way of farming.

VII. CONCLUSION

1) It seems from the research study that most of the farmers are growing the same crops from many years without changing the cropping patterns. The reason of growing the same pattern of crops was because of behavior of monsoon and occurrence of pest and diseases. In the past five years, monsoons were above average only ones. Thus from the result of the present study, it can be concluded that the respondents are inclined to take no risk.

2) Agriculture related traditional implements existing in the local region of North 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 and material having superior quality.

3) Watersheds also fail to recognize traditional knowledge systems and do little to promote indigenous crop varieties. There is an urgent need to address all these problems for any level of people’s involvement and sustainability. Despite this rocketing rise in demand, India’s supply remains constrained. While agriculture accounts for around three quarters of all water used in India, rapid demand from commercial and industrial users have placed undue stress on already fragile resources.

4) According to the central water Commission, the demand for water will climb from 634 billion cubic meters (BCM) to 1,093 BCM in 2025, to 1447 BCM by 2050. Also, India has over 2.7 crore tubewells and borewells, According to government data marginal farmers owns 66% of these wells. (Source: Respective city water boards and estimates). 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.
Atul N. Barekar :: An Empirical Study Of Traditional/Local Farming And Its Management In Northern Region Of Maharashtra

V. REFERENCE


To Cite This Article