Zero Budget Natural Farming (ZBNF) Boon or Bane – A Study with Reference to the Agriculture Sector

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Abstract— Zero-Budget Natural Farming (ZBNF) is an alternative to the chemical based and high cost input agricultural farming activities. Its principles are based on the principles of Agro –ecology. The movement of all countries towards the adoption of Agroecology to meet the global food security and conservation of environment is urged by the UN-FAO in April, 2018. Privatized seeds, inputs, and markets are inaccessible and expensive for farmers. To meet the high production costs, high interest rates for credit, the volatile market prices of crops, the rising costs of fossil fuel based inputs, and private seeds, debt is a problem for farmers all over India. Zero budget farming is an alternative and a reliance on loans and ending the debt problem for distressed farmers. ‘Zero Budget’ means without using any credit, and without spending any money on purchased inputs. ‘Natural farming' means farming with Nature and without chemicals. The local self government and state government take initiatives to introduce the ZBNF as method to reduce the cost of agricultural operations and to arrange the awareness programmes to promote and cultivate the maximum benefit to farmers.

Keywords- ZBNF, FAO, Agroecology

I. INTRODUCTION

Zero Budget Natural Farming is a resource of cultivating practice in which normal development of yields is made without utilizing any manures and pesticides. ZBNF principles depend on the standards of Agro-nature. UN FAQ in 2018 proclaimed the appropriation of Agro-nature towards nations to meet worldwide sustenance security and preservation of the earth. ZBNF harvests helps in holding soil treating and is environmental change quiet. Four wheels of ZBNF are Seed treatment, abstaining from preparing and pesticides, synthetic more liberated agribusiness and most minimal and zero expense to ranchers.

In ZBNF nothing has to be purchased from the outside. Without including from outside, the plants develops and gives the items. That is every one of the supplements required for development and creation are accessible from the roots. Along these lines in ZBNF a farmer has lower cost of data sources and consequently has better ability to expand the pay. In natural farming as compared to chemical based farming activities farmers investment and cost of production is comparatively very low as they could not find sources of rising loans at high rates of interest. They can raise fund for initial investment in agricultural operations at lending institutions with government subsidy.

ZBNF is useful for upgrading the farmer's welfare, buyer welfare and for the preservation of nature. It is extremely powerful in the present issues caused to a dangerous atmospheric deviation and the results prompting atmosphere changes and characteristic vulnerabilities. Zero Based Budget refers to the Zero net cost of production of all crops.
REVIEWS

Khadse, Ashlesha and Rosset, Peter (2019), in their study the growth of ZBNF in India and highlighted the challenges and contradictions that may arise in the institutionalisation process mentioned that ZBNF as a social movement of peasants in the state of Karnataka becoming institutionalisation by the Andra Pradesh as a state programme.

Akshaya Bhati (2017), opined that using conventional technique is cancer to soil and eventually farmers goes under debt. She studied the principle methods adopted in the ZBNF.

Surabh Tripati, Shruti Nagbhushan and Tanseef Shahidi (2018), justified in their study that ZBNF could be help in India led in promoting and implementing projects that are targeted.

The study is mainly based on the following objectives;
1. To study Zero Budget Natural Farming as a reliance to farmers for the agricultural debt problem faced by them.
2. To examine the role of state to promote the Zero Budget Natural Farming as a reliance to farmers for solving their agricultural debt.
3. To analyse the factors helping to reduce the cost of agricultural production through Zero Budget Natural Farming.

HYPOTHESES
1. There is no association between the opinion regarding ZBNF as a reliance for agricultural debt problem faced by the farmer.
2. There is no association between the opinion regarding the role of state to promote the ZBNF as a reliance to farmers for solving the agricultural debt.

II. METHODOLOGY

The study is descriptive in nature. Both primary and secondary data were used for the purpose of analysis. Primary data were collected from the response of farmers in the Kerala state who are followed the traditional and ZBNF methods for agricultural operations and those who are willing to change their agricultural operations according to the ZBNF model. Secondary data were collected from the published reports and official website of the government. Sample of the study consists of 140 farmers selected from each districts of Kerala. Field survey was conducted to meet the farmers and directly collected the opinion of the respondents. Mean score, SD and Chi-square test was used to interpret the collected responses.

The main problem faced during this study was the number of farmers followed the ZBNF is very limited and they were not aware of the method of operations and have not available any proper training facilities to this field. The government initiatives are also very nominal. So, the farmers were not in a position to take the risk of operations in the ZBNF because inadequate support and awareness. Therefore, they would like to follow the traditional method of agricultural operations during this period also.

Table 1
Sample selection of the respondents

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Districts</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thiruvanamthapuram</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Kollam</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Alappuzha</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Pathanamthitta</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Kottayam</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Idukki</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>Ernakulam</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Thrissure</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Palakkad</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>Malappuram</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>Kozhikodu</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>Wayanad</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>Kannur</td>
<td>9</td>
</tr>
<tr>
<td>14</td>
<td>Kasargod</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>140</td>
</tr>
</tbody>
</table>

III. RESULTS AND DISCUSSION

High production cost, high interest rate and volatile market prices of crops are the big problems
faced by the farmers. Rising cost of pesticides, fuel based inputs, wages, private seeds and marketing of the outputs are the big problems faced by the farmers. In order to meet the cost of farming activities they are searched for the sources of financial assistance. They depend on loans from financial institutions. Sometimes they approached local money lenders with high interest rates. Therefore, debt is a big problem of farmers. In ZBNF, the cost of farming activities is zero. The investment of the farmers is considered as zero. That is, without using any credit and without using any money on purchasing inputs. The farmers can raise funds for initial investment in assets for agricultural operations.

**ZBNF as a reliance on farmers for their agricultural debt problem**

The cost of operation of agricultural activities under ZBNF is very low or considered as zero. Farmers opinion regarding ZBNF as a reliance to face the increasing debt problem was examined with the help of the cost in agricultural activities like cost of production, expenses in connection with marketing activities and interest on loan for initial investment (that is investment in purchasing agricultural equipments etc.).

The mean score of opinion of farmers in regarding cost of production is measured under different levels such as zero, low, moderate, high and very high. The overall mean score from all the respondents in each district is very high which is more than the average score (3.53). The mean score under different levels were zero (3.2), low (3.3), moderate (3.01), high (1.02) and very high (0.22). District wise mean score with regard to expenses in connection with marketing expenses was zero (1.1), low (0.99), moderate (2.57), high (3.72) and very high (3.64). The mean score of the opinion of the farmers for the cost of initial investment at low level was (1.01), at moderate level (2.03), high level (3.47) and very high level (3.34). Therefore the result concluded that the cost of agricultural activities under ZBNF was low. Therefore, it is a reliable source to solve the debt problems faced by them.

**Table 3**

<table>
<thead>
<tr>
<th>Role of state to promote the ZBNF as an alternative to solve the debt problem faced by the farmers</th>
<th>Variables</th>
<th>Following ZBNF</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Training facilities</td>
<td>3.59</td>
<td>.348</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subsidised loan for initial investment</td>
<td>3.54</td>
<td>.832</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organised market for sale of products</td>
<td>3.67</td>
<td>.897</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit facilities with low interest rates</td>
<td>3.47</td>
<td>.726</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arrangement of supply of equipment through government agencies</td>
<td>3.34</td>
<td>.787</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>3.99</td>
<td>.954</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled Data

The variables considered to analyse the role of state was training facilities, loan with government subsidy, organised market for sale of product, credit facilities with low interest rates for the purchase of assets and the arrangement of the supply of equipment through government agencies. Overall score with regard to the opinion of farmers with regard to the role of state to promote the ZBNF is very high (3.99). The mean score under different

**Table 2**

<table>
<thead>
<tr>
<th>ZBNF as a reliance on farmers for their Agricultural Debt Problem</th>
<th>Levels</th>
<th>Cost of production</th>
<th>Expenses in connection with Marketing Activities</th>
<th>Interest on loan for initial investment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Zero</td>
<td>3.2</td>
<td>.54</td>
<td>1.1</td>
<td>.32</td>
</tr>
<tr>
<td>Low</td>
<td>3.3</td>
<td>.78</td>
<td>0.99</td>
<td>.23</td>
</tr>
<tr>
<td>Moderate</td>
<td>3.01</td>
<td>.53</td>
<td>2.57</td>
<td>.32</td>
</tr>
<tr>
<td>High</td>
<td>1.02</td>
<td>.20</td>
<td>3.72</td>
<td>.92</td>
</tr>
<tr>
<td>Very High</td>
<td>0.22</td>
<td>.01</td>
<td>3.64</td>
<td>.91</td>
</tr>
<tr>
<td>Overall</td>
<td>3.53</td>
<td>.65</td>
<td>3.04</td>
<td>.78</td>
</tr>
</tbody>
</table>

Source: Compiled Data
dimensions of the study was high in credit facilities (3.47) and arrangement for the supply of equipments (3.34) and very high in the opinion of proper training facilities (3.59), loan with government subsidies (3.54) and organised market for supply of products (3.67).

Factors helping to reduce the cost of agricultural production

Debt is a problem faced by farmers of India. Privatized seeds, inputs, and markets are inaccessible and expensive for peasants due to the neo liberalization of the Indian economy. ZBNF is a promise to end a reliance on loans and helps to cut the production costs, ending the debt problem of farmers. Finance minister Nirmala Sitharaman announced that her government will promote Zero Budget Natural Farming (ZBNF) to reduce cost of production of farmers and thereby double their income. Subhash Palekar, who coined the word ZBNF, has been asked by 6 state governments to train their farmers on his techniques.

Table 4
Factors helping to reduce the cost of agricultural activities

<table>
<thead>
<tr>
<th>Variables</th>
<th>Following ZBNF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Proper channels for Training</td>
<td>3.58</td>
</tr>
<tr>
<td>Arrangement of channels of marketing of products</td>
<td>3.78</td>
</tr>
<tr>
<td>Proper Ware house/ god owns for storage of output</td>
<td>3.23</td>
</tr>
<tr>
<td>Subsidised Credit facilities or marginal interest rates loans</td>
<td>3.47</td>
</tr>
<tr>
<td>Arrangement of supply of equipment through government agencies</td>
<td>3.64</td>
</tr>
<tr>
<td>Overall</td>
<td>4.28</td>
</tr>
</tbody>
</table>

Source: Compiled Data

Factors helping to reduce the cost of agricultural activities were analysed with the help of channels of training, arrangement of marketing channels by the authority, storage facilities to keep the products, credit facilities with subsidy from government or loan through agricultural credit institutions with marginal rate of interest. Overall mean score and mean score of the factors considered was very high (4.28 and 3.64, 3.47, 3.23, 3.78 and 3.58) confirmed that select the suitable strategy and method always help to reduce the cost arising in it.

Table 5
Association of the opinion regarding the farmers that the ZBNF as reliance on loan to face the debt problem

<table>
<thead>
<tr>
<th>Chi- square value</th>
<th>Degree of freedom</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZBNF as a reliance to solve debt problems</td>
<td>2.553*</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Compiled Data

*significant at 5% level

The observed value is significant at 5% level. Therefore, it can be concluded that there is an association of opinion regarding ZBNF as a reliance on loan to face the debt problem.

Table 6
Association of opinion regarding the role of state to promote ZBNF as a reliance to solve the debt problem of farmers

<table>
<thead>
<tr>
<th>Chi- square value</th>
<th>Degree of freedom</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of state to promote ZBNF as a method to solve the agricultural debt</td>
<td>2.942*</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Compiled Data

*Significant at 5% level

The observed value is significant at 5% level. Therefore, it can be concluded that there is an association of opinion regarding the role of state to
promote the ZBNF as a reliance on loan to face the
debt problem.

IV. CONCLUSION

Zero Budget Natural Farming is method of
grazzroots peasant movement followed many of the
Indian states. The local self government and state
government take initiatives to introduce the ZBNF
as method to reduce the cost of agricultural
operations and to arrange the awareness programmes
to promote and cultivate the maximum benefit to
farmers as the farmers were reluctant to change their
method of operation because they are not in a
healthy position to took the risk in the new method
and lack of proper knowledge.Majority of the
farmers are poor financial background and have not
adequate land and other equipment for agricultural
operations. Therefore, to motivate farmers to follow
the ZBNF is a big task in front of the government.
But it is a solution to solve the debt problems faced
by the farmers, avoid the increasing suicide rate and
for facing the current issues relating to environment
problems. Protect the soil, water and other natural
resources from chemical background thereby
protecting the human lives and also to protect our
earth.

REFERENCES AND SELECTED BIBLIOGRAPHY

[1] Food and Agricultural Organisations of the
United Nations-

[2] La Via Campesing–lcvweb@viacampensia.org

[3] SarmaPrasad 2016, “Campaign to reduce use of


[5] apzbnf.in


[7] pib.nic.in


Ferguson, 2017, Taking agroecology to scale; The
Zero Budget Natural Farming peasant movement
in Karnataka, India, The Journal of peasant
studies 1-28.

[10] La Via Compensia. 2016, Bero Budget Natural
Farming in India. Family Farming Knowledge
Platform of FAO. http:// www.fao.org/family -
farming/en/c/429762/.

individual family farms’ Empirical insights from
India, World Development 108 -57-
73doi.10.1016/ worlddev.2018.03.010j

Budger Natural Farming in India from inception
to Institutionalisation, Journal of Agroecology
and Sustainable Food system

Zero Budget
Natural Farming, Ty JOUR

[14] Surabh Tripati, Shruti Nagbhushan and Tanseef
Shahidi 2018, Zero Budget Natural Farming for
the sustainable Development Goals, Andra
Prades, In India, Council of Energy
Environment and Water, New Delhi