# Training Needs of Agricultural Input Dealers in Transfer of Agriculture Technology

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*ABSTRACT*

*Agriculture is the backbone of Indian economy since 1960, when this sector was in humble state. Agricultural research and extension are two important factors of agricultural development. An efficient extension system capable of timely dissemination of need based farm technology among farming communities is of paramount importance for achieving sustained growth in agriculture. The system of transfer of technology from research stations to the farming community has played a crucial role in modernizing agriculture. Farmers now required adopting a wider range of inputs and practices, and developing skills for there more efficient use. Keeping this in mind the policy framework for Agriculture Extension outlined by the task force on Agriculture Extension, Department of Agriculture and Cooperation, Ministry of Agriculture, GOI recognized the role of multi agency dispensation comprising different strengths. It was also recognized that the policy environment will have to promote private extension to operate in roles that complement, supplement, work in partnership, and even substitute for public extension. Apart from the extension services rendered to the farmers by the state Department of Agriculture and other organizations to boost up agricultural production, agricultural input dealers are also playing an important role in increasing agricultural production in the country. The most of the agriculture input dealers are related to transfer of agriculture technology. Agriculture inputs dealers may this way perform the function of the "Change agent". The main aim of agriculture input dealers was thus to provide expert services, advice to farmers and supply of inputs to agriculture according to local needs i.e. quality seeds, fertilizers, pesticides, engineering material and provide the employment to the people. The present study is focussed to know the training needs of the dealers in transfer of farm technology and running the agriculture input centre. Keeping in view the importance, scope and statement of problem of the topic, the present investigation entitled Training Needs of Agricultural Input Dealers in Transfer of Agriculture Technology in Ratnagiri District of Konkan Region was undertaken with the following objectives.*

***Keywords :*** *Training needs, Input dealers, Transfer of technology*

## INTRODUCTION

Agriculture is the backbone of Indian economy since 1960, when this sector was in humble state. Agricultural research and extension are two important factors of agricultural development. An efficient extension system capable of timely dissemination of need based farm technology among farming communities is of paramount importance for achieving sustained growth in agriculture. The system of transfer of technology from research stations to the farming community has played a crucial role in modernizing agriculture. Farmers now required adopting a wider range of inputs and practices, and developing skills for there more efficient use. Keeping this in mind the policy framework for Agriculture Extension outlined by the task force on Agriculture Extension, Department of Agriculture and Cooperation, Ministry of Agriculture, GOI recognized the role of multi agency dispensation comprising different strengths. It was also recognized that the policy environment will have to promote private extension to operate in roles that complement, supplement, work in partnership, and even substitute for public extension.

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most of the agriculture input dealers are related to transfer of agriculture technology. Agriculture inputs dealers may this way perform the function of the "Change agent". The main aim of agriculture input dealers was thus to provide expert services, advice to farmers and supply of inputs to agriculture according to local needs i.e. quality seeds, fertilizers, pesticides, engineering material and provide the employment to the people.

The present study is focussed to know the training needs of the dealers in transfer of farm technology and running the agriculture input centre. Keeping in view the importance, scope and statement of problem of the topic, the present investigation entitled Training Needs of Agricultural Input Dealers in Transfer of Agriculture Technology in Ratnagiri District of Konkan Region was undertaken with the following objectives.

**OBJECTIVES**

(i) To study the personal and socio-economic characteristics of agricultural input dealers

(ii) To know the training needs of agricultural input dealers

**METHODOLOGY**

Konkan region consist of five districts namely Thane, Mumbai, Raigad, Ratnagiri, and Sindhudurg. Ratnagiri district from Konkan region was selected. As the number of agriculture input dealers in these districts was comparatively more than those of other districts in the respective region. The Ratnagiri district consists nine tahsil. All tahsil were selected namely, Ratnagiri, Chiplun, Sangmeshwar, Guhagar, Rajapur, Dapoli, Khed, Lanja and Mandangad. For study purpose, the proprietor of agricultural input dealers was selected as respondents by random sampling. For this study, 75 agriculture input dealers were drawn from selected tahsils of district.

Training needs of the agriculture input dealers was a major aspect of the study. Training needs of the agriculture input dealers was measured by computing training need score. Training need of the respondents was assessed on a three point continuum scale as 'most needed (2 score)', 'needed (1 score)' and 'not needed (0 score)'. In order to determine training needs of the agricultural input dealers, a training need index was developed by using following formula.

$$\text{Training need index} = \frac{\text{Score obtained}}{\text{Maximum obtainable score}} \times 100$$

**RESULTS AND DISCUSSION**

**Characteristics of agricultural input dealers**

The data in respect of personal and socio-economic characteristics of agricultural input dealers was indicated that majority (65.33 per cent) of the respondents from region belonged to 'middle' age group. More than half (57.34 per cent) of the respondents were 'graduate'. Majority (97.33 per cent) of the respondents had 'fertilizer dealing' as their major occupation. Two-third (66.66 per cent) of the respondents had 'medium' annual income. The average annual income of the respondents was ₹ 4, 58,200/-. Majority (74.67 per cent) of the respondents had 'medium' experience in fertilizer dealing. The average experience in fertilizer dealing of the respondents was '14 years'. Two-third (65.33 per cent) of the respondents had 'medium' level of information seeking behavior. Two-third (66.67 per cent) of the respondents had 'high' level of cosmopoliteness. Three-fifth (52.00 per cent) of the respondents had 'medium' risk orientation. Three-fifth (68.00 per cent) of the respondents had 'medium' economic motivation. Over one-third (38.67 per cent) of the respondents from Konkan had 'received' training on various aspects related to fertilizers, seeds, insecticides, pesticides, implements and their use.

**Training needs of the agricultural input dealers**

In order to depict the overall scenario of training need in all areas together, the respondent dealers were grouped into three categories as per the procedure explained in the methodology and is presented in Table1.

**Table 1: Distribution of the respondents according to their training need** n=75

| Sr. No. | Training need | No. | Per cent |
|---|---|---|---|
| 1 | Low | 11 | 14.67 |
| 2 | Medium | 50 | 66.67 |
| 3 | More | 14 | 18.66 |

It revealed from Table 1 that majority (66.67 per cent) of the respondents had 'medium' training need on various aspects of fertilizer, seed, pesticides, machinery and implements, animal feed and chemicals and their use While 18.66 per cent of the respondents had 'more' training need. Followed by 14.67 per cent of the respondents had 'low' training need.

**Table 2 : Specific training needs of agricultural input dealers** n=75

| Sr. No. | Training areas | Most needed | Somewhat Needed | Not needed |
|---|---|---|---|---|
| **A** | **Related to fertilizer** | | | |
| 1 | Type of fertilizers | 2 (2.66) | 26 (34,67) | 47 (62.67) |
| 2 | Soil testing for fertilizer application | 7 (09.33) | 17 (22.67) | 51 (68.00) |
| 3 | Methods of fertilizer application | - | 8 (10.67) | 67 (89.33) |
| 4 | Micro-nutrients fertilizers | 37 (49.33) | 36 (48.00) | 2 (2.67) |
| 5 | Bio-fertilizers | 3 (4.00) | 57 (76.00) | 15 (20.00) |
| 6 | Methods of nitrogenous fertilizer application | - | 8 (10.67) | 67 (89.33) |
| 7 | Nutrient contents in fertilizers | 1 (1.33) | 4 (5.33) | 70 (93.33) |
| 8 | Cake fertilizers | - | 30 (40.00) | 45 (60.00) |
| 9 | Fertigation | 2 (2.66) | 19 (25.33) | 54 (72.00) |
| 10 | Implements used for fertilizer application. | 1 (1.33) | 29 (38.67) | 45 (60.00) |
| 11 | Composting | 2 (2.66) | 24 (32.00) | 49 (65.33) |
| 12 | Vermin-composting | 10 (13.33) | 41 (54.67) | 24 (32.00) |
| 13 | Go-down construction | - | 9 (12.00) | 66 (88.00) |
| 14 | Fertilizer store | - | 17 (22.67) | 58 (77.33) |
| 15 | Integrated nutrient management | 59 (78.67) | 15 (20.00) | 1(1.33) |
| 16 | Fertilizer doses for crops | - | 23 (30.67) | 52(69.33) |
| **B** | **Related to Seeds** | | | |
| 1 | Type of seeds | - | 23 (30.67) | 52(69.33) |
| 2 | Improved varieties and hybrids of different crops | 43 (57.33) | 30 (40.00) | 2 (2.67) |
| 3 | Germination power of seeds of different crop | 1 (1.33) | 10 (13.33) | 64 (85.33) |
| 4 | Viability of seeds of different crops | 1 (1.33) | 9 (12.00) | 65 (86.67) |
| 5 | Seed treatment | 3 (4.00) | 38 (50.67) | 34 (45.33) |
| 6 | Ideal seed storage | - | 2 (2.67) | 73 (97.33) |
| 7 | Certified seeds | - | 19 (25.33) | 56 (74.67) |
| 8 | Fumigation to seeds | - | 7 (9.33) | 68 (90.67) |
| 9 | Cultivation of hybrids of different crops | - | 1 (1.33) | 74 (98.67) |
| **C** | **Related to pesticides** | | | |
| 1 | Type of pesticides | 1 (1.33) | 19 (25.33) | 55 (73.33) |
| 2 | Preparation of solution of pesticides for spraying | 1 (1.33) | 22 (29.33) | 52 (69.33) |
| 3 | Types of improved sprayers and dusters | 30 (40.00) | 38 (50.67) | 7 (9.33) |
| 4 | Disposal of empty bottles and containers | - | 6 (8.00) | 69 (92.00) |
| 5 | Control of disease and insect by proper pesticides | 15 (20.00) | 54 (72.00) | 6 (8.00) |
| 6 | Protective measures and treatment over poisoning | 3 (4.00) | 5 (6.67) | 67 (89.33) |
| 7 | Methods of proper spraying and dusting | 9 (12.00) | 41 (54.67) | 24 (32.00) |
| 8 | Protection of the stored seeds from pest | - | 1 (1.33) | 74 (98.67) |
| **D** | **Related to machinery and implements** | | | |
| 1 | Repairing of machinery and implements | - | 40 (53.33) | 35 (46.67) |
| 2 | Operating of machinery and implements | 1 (1.33) | 34 (45.33) | 40 (53.33) |
| 3 | Purchasing of machinery and implements | 1 (1.33) | 25 (33.33) | 49 (65.33) |
| 4 | Regarding getting subsidy and loan | 2 (2.66) | 13 (17.33) | 60 (80.00) |
| 5 | Regarding driving | - | 19 (25.33) | 56 (74.67) |
| **E** | **Related to animal feed and chemicals** | | | |
| **(a)** | **About animal feed** | | | |
| 1 | Types of feeds | - | 9 (12.00) | 66 (88.00) |
| 2 | Nutrients content in feeds | - | 1 (1.33) | 74 (98.67) |

| Sr. No. | Training areas | Most needed | Somewhat Needed | Not needed |
|---|---|---|---|---|
| 3 | Types of feeds for different animals | - | 6 (8.00) | 69 (92.00) |
| 4 | Doses of feeds for different animals | - | 2 (2.67) | 73 (97.33) |
| 5 | Storage of feeds for long time | - | 1 (1.33) | 74 (98.67) |
| **(b)** | **About animals Drugs** | | | |
| 1 | Types of Drugs | - | 10 (13.33) | 65 (86.67) |
| 2 | Doses of Drugs | - | 1 (1.33) | 74 (98.67) |
| 3 | Regarding animal disease | - | 10 (13.33) | 65 (86.67) |
| 4 | Treatment of different animals | - | 9 (12.00) | 66 (88.00) |
| **F** | **Other** | | | |
| 1 | Information communication technology | 36 (48.00) | 33 (44.00) | 6 (8.00) |
| 2 | Efficient use of information technology | 42 (56.00) | 32 (42.67) | 1 (1.33) |
| 3 | Internet | 6 (8.00) | 34 (45.33) | 35 (46.67) |
| 4 | Business management | 66 (88.00) | 8 (10.67) | 1 (1.33) |
| 5 | Government rules and regulation | 33 (44.00) | 36 (48.00) | 6 (8.00) |

**Note :** Figure in parentheses indicates percentages

It is observed from Table 2 that almost (49.33 per cent) the agricultural input dealers from region had expressed 'mostly needed' training needs on 'micro nutrient fertilizers' followed by 'integrated nutrient management' (78.67 per cent), 'improved varieties and hybrids of different crops'(57.33 per cent), 'types of improved sprayers and dusters'(40.00 per cent), 'information communication technology' (48.00 per cent), 'efficient use of information technology' (56.00 per cent), and 'business management' (88.00 per cent). However, the 'Somewhat Needed' training need was expressed by them about 'nutrient content in fertilizers' (5.33 per cent), 'methods of fertilizer application' (10.67 per cent), 'methods of nitrogenous fertilizer application'(10.67 per cent), 'storage fertilizers' and 'godown construction'22.67 per cent and 12.00 per cent respectively. followed by 'germination power of seeds of different crop'(13.33 per cent), 'viability of seeds of different crops'(12.00 per cent), 'Seed treatment'(50.67 per cent), 'ideal seed storage'(2.67 per cent), , while 'Purchasing of machinery and implements'(33.33 per cent), 'Regarding getting subsidy and loan' (17.33 per cent), while 'protection of the stored seeds from pest'(1.33 per cent), 'protective measures and treatment over poisoning'(6.67 per cent), and 'nutrients content in feeds'(1.33 per cent).

## CONCLUSION

Findings of the study led to concluded that agricultural inputs are one of the major inputs in modern agriculture such as fertilizers, pesticides, insecticides, seeds, tools and implements and machinery. The high yielding varieties of different crops are responsive to the chemical fertilizers. So, high yielding varieties, coupled with chemical fertilizers and farm mechanization have contributed greatly in bringing green revolution in our country. Use of any input as per recommendation is dependent upon ready availability of that input to the farmers, so is the case of chemical fertilizers, seeds, insecticides, pesticides and tools and implements. The government has introduced many measures for timely and adequate supply of desired fertilizers at reasonable price to the needy farmers. The agricultural input dealers play an important role in providing the farm input to the farmers. While trading the farm inputs, the dealers advise the farmers about their use and application in the field. As such, the dealers must possess the appropriate knowledge about the fertilizer use in the field. So, imparting to them is necessary training to increase the performance of the agricultural input dealers. This would help in increasing crop production and economic status of the agriculturists.

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