

TRAINING NEEDS ASSESSMENT OF AGRI-INPUT DEALERS

KADIRI MOHAN*, P.GANESH KUMAR and P.RAJASEKHAR

Regional Agricultural Research Station,
Acharya N.G. Ranga Agricultural University, Tirupati - 517 502

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ABSTRACT

The sample of 120 Agri input dealers was studied for assessment of their training needs in Chittoor district of Andhra Pradesh during 2018-19. The results revealed that the major crops for which trainings required are rice, groundnut and mango. Germination tests for testing viability of seeds and seed materials, labeling and seed certification were among the top needed training areas under the aspect of seeds and planting material. Types of manures and fertilizers available and dosage calculations of straight and complex fertilizers were the most needed training areas under manures and fertilizers aspect. Most important training needs related to agrochemicals aspect are pest and diseases identification in major crops, pesticides and their mode of action. Regarding farm machinery, latest farm implements and their maintenance was identified as an important training need. Further, in addition to agricultural aspects, input dealers expressed the necessity of training requirement on business licensing, renewals, taxation and billing. Respondents preferred to have trainings of one-week duration, during the period of February to April with a periodicity once in every year for organising the trainings.

Key words: Training Needs Assessment, Agri- input dealers, Training duration and Periodicity of trainings

INTRODUCTION

Technological advances in agriculture that were transferred to the farmers by various extension systems contributed to the current land mark of 283.37 million tons of food grain production in 2018-19 (GoI, 2018). Various extension systems included Government, NGO, and Private Sector Extension service providers are involved in the transfer of technology (ToT) and providing agri services.

Agri-input dealers became the important service providing partner to the farming community not only by supplying the agri inputs but by providing the needed agro-advisory

services playing useful role in the agricultural production system. The input dealers are the bridge between farmers and agricultural developmental agencies, and often viewed by the farmers as a "friend, philosopher and guide" and is truly a change agent (Whagmode, 2014).

In India, the number of practising agri-input dealers is around 2,82,000 (GoI, 2014). For the farmers, agri-input dealer is the first contact person. During the purchase of different inputs, a farmer seeks advice on the type and usage of inputs from agri input dealers. The input dealers can be developed as Para-Extension professionals by organizing more training

*Corresponding Author E-mail i.d: kadirimohan@gmail.com

programmes on the identified areas for improving their agricultural knowledge and thereby their role performance in delivering the agri input services to the farmers.

Most of the pesticide retailers need training on various aspects being encountered in their day-to-day business such as pest and pesticides management and IPM techniques (Singh *et al.*, 2015). Training is a continuous process of acquiring the essential skills required for performing certain jobs. Training Needs Assessment (TNA) refers to the organizational process of collecting and analyzing data for deciding on when and on what trainings need to be conducted (Clarke, 2013). Hence, the study was conducted to assess the various training areas needed for the agri input dealers and also other aspects like duration, time and periodicity of the training programme.

MATERIAL AND METHODS

The assessment study was conducted during 2018-19 in Chittoor district of Andhra Pradesh. A sample of 120 licensed agri-input dealers was selected randomly who were participating in Diploma for Agricultural Extension Services for Input Dealers (DAESI) programme during 2018-19. After discussion with the agri-input dealers, subject matter specialists of extension discipline and based on the activities and advices offered by the agri-input dealers, the training areas and topics were identified. The response from the agri-input dealers was sought using a pre-tested semi-

structured interview schedule developed on a three-point rating scale namely, Most Needed, Needed and Not Needed and responses were quantified by assigning the scores of 3, 2 and 1, respectively. Training Need Index (TNI) was computed by using the formula:

$$\text{Training Need Index (TNI)} = \frac{\text{Score obtained}}{\text{Maximum obtainable score}} \times 100$$

Based on the TNI, the Need Hierarchy Rank was assigned for identification of most needed topics among the given category.

RESULTS AND DISCUSSION

Crop Specific Training needs

The results revealed that trainings were needed by agri input dealers on crops namely, rice (rank I), groundnut (rank II), mango (rank III), flower crops (rank IV) and sugarcane (rank V) followed by other crops namely, vegetable crops (Tomato, Brinjal, etc)(rank VI), maize (rank VII), oil seed crops (castor, gingerly, etc) (rank VIII), minor millets (rank IX), forage crops (rank X), jowar (rank XI) and sorghum (rank XII) (Table 1). The results emphasized that the agri input dealers need training mostly on the crops that were grown extensively in the Chittoor district *viz.*, rice, groundnut, Mango and also some vegetable crops on which they lack the knowledge on cultivation. To address these training needs, a complete cultivation package along with the latest technologies on the crops should be made available to the agri-input dealers.

Aspect-wise Training Needs

Training Needs on seeds and planting material

Agri-input dealers required trainings on germination tests for seeds and viability (rank I), seed material and their labeling (rank II), seed certification, seed laws and regulations (rank III), seed storage management(rank IV) and seed rates for different methods of sowing(rank V) (Table 2).The results revealed that the dealers need more knowledge on seed viability and seed storage also as selling different types of seed material was their major business. The dealers are frequently encountering problems in renewal and registration during seeds certification and regulations, hence, they opined to receive more trainings on these aspects.

Training Needs on manures and fertilizers

Results revealed that when training on various types of manures and fertilizers (rank I), dosage calculations for nutrients from straight and complex fertilizers (rank II), micronutrients management(rank III), management of problematic soils (rank IV) and organic and natural nutrient formulations and their usage (rank V) were perceived as important by the agri input dealers (Table 3). Other priority aspects on which training required included fertilizer governing laws and regulations (rank VI),major nutrients management (rank VII), bio-fertilizers and their usage (rank VIII), soil health card based nutrient management (rank IX), usage of nutrient mixtures (rank X), bio formulations usage (rank XI), liquid fertilizers usage (rank XII) and compatibility of different manures and fertilizers with other

agrochemicals (rank XIII) and safety issues manures and fertilizers (rank XIV).Similar results were reported by Shelakeeta. (2015), that input dealers had expressed 'high' training needs on 'micronutrient fertilizers' followed by 'integrated nutrient management'.

Agri-input dealers majorly involved in the business of manures and fertilizers. Farmers not only buy these inputs, but, also seek advice on what kind, how much and when to apply these manures and fertilizers. Because of this reason dealers need more updated information on crop nutrients for various crops and their usage so that they can in turn advise the farmers during input selling and gain their confidence. Specialized trainings on crop nutrition aspects periodically will ultimately help the agri input dealers to gain the latest knowledge.

Training Needs on Agrochemicals

Results of training needs assessed on aspects related to Agrochemicals (Table 4) revealed identification of pest and diseases on major crops (rank I), pesticides and their mode of action (rank II), usage of weed control chemicals and precautions (rank III), pesticides government laws and regulations (rank IV) and growth regulators and promoters for different crops (rank V) were perceived as most important areas for trainings. Other training aspects included pesticide residues and their management (rank VI), agro chemical formulations and their correct usage (rank VII), control of non-insect pests such as rats, birds, vertebrates, etc (rank VIII), harmful effects on crops, humans and environment (rank IX) and precaution and use of antidotes (rank X) were the other areas of training required. Ranked

results revealed that compatibility of different agrochemicals (rank XI), use and maintenance of plant protection equipments (rank XII), protection measures and equipment for safe usage (rank XIII), ecological friendly insects and disease control products (XIV) and label claims (XV) were other aspects on which agri input dealers required training.

Sale of modern agrochemicals is always the most challenging task for any agri-input

dealers as it involves high technicalities such aspest and diseases identification, recommending the suitable agro chemicals, their dosages, its efficacy, mode of action and application, compatibility and various other details. The acquired knowledge by receiving the training on identified new areas will help them to give more new technological advice to the farmers and thereby they can win the trustworthiness of the farmers which will improve their business also.

Table 1. Crop specific Training Needs required (n=120)

| S.No. | Crop | TNI | Need Hierarchy Rank |
|-------|--|-------|---------------------|
| 1 | Rice | 91.39 | I |
| 2 | Maize | 72.78 | VII |
| 3 | Jowar | 63.61 | XI |
| 4 | Sorghum | 63.06 | XII |
| 5 | Minor millets | 70.00 | IX |
| 6 | Groundnut | 89.44 | II |
| 7 | Sugarcane | 80.56 | V |
| 8 | Forage crops | 68.06 | X |
| 9 | Mango | 88.33 | III |
| 10 | Vegetable crops (Tomato, Brinjal, etc) | 79.44 | VI |
| 11 | Flower crops | 82.22 | IV |
| 12 | Oil seed crops (Castor, Gingelly, etc) | 70.56 | VIII |

Table 2. Training Needs on seeds and planting material (n=120)

| S.No. | Training Aspect | TNI | Need Hierarchy Rank |
|-------|---|-------|---------------------|
| 1 | Seed material and their labeling | 81.40 | II |
| 2 | Germination tests for seeds and viability | 84.00 | I |
| 3 | Seed storage management | 79.20 | IV |
| 4 | Seed certification, seed laws and regulations | 79.70 | III |
| 5 | Seed rates for different methods of sowing | 74.70 | V |

Table 3. Training Needs on manures and fertilizers (n=120)

| S.No. | Training Aspect | TNI | Need Hierarchy Rank |
|-------|---|-------|---------------------|
| 1 | Various types of manures and fertilizers available | 87.78 | I |
| 2 | Dosage calculations for nutrients from straight and complex fertilizers | 86.94 | II |
| 3 | Liquid fertilizers usage | 78.06 | XII |
| 4 | Safety management of manures and fertilizers | 79.17 | XIV |
| 5 | Compatibility of manures and fertilizers with other agrochemicals | 77.22 | XIII |
| 6 | Major nutrients management | 85.00 | VII |
| 7 | Management of problematic soils | 85.83 | IV |
| 8 | Micronutrients management | 86.39 | III |
| 9 | Bio formulations usage | 80.00 | XI |
| 10 | Organic and natural nutrient formulations and their usage | 85.56 | V |
| 11 | Fertilizers government laws and regulations | 85.28 | VI |
| 12 | Soil health card based nutrients management | 83.06 | IX |
| 13 | Bio fertilizers and their usage | 83.33 | VIII |
| 14 | Usage of nutrient mixtures | 81.11 | X |

The results are supported by the study of Mande and Darade (2011) who reported that majority of the farm input dealers had medium level of knowledge about advanced technology related to use of seeds, fertilizers and pesticides and most of the farm input dealers had needed training related to their sub-areas.

Training Needs on farm implements and machinery

Results revealed that input dealers need

training on latest farm implements and machinery (rank I) and maintenance of implements and machinery (rank II) (Table 5). Agri- input dealers also sell small farm implements and tools for the farmers and also give advices for repair and maintenance, exclusive trainings on the farm machinery aspects will help to improve the competencies.

Table 4. Training Needs on Agrochemicals (n=120)

| S.No. | Training Aspect | TNI | Need Hierarchy Rank |
|-------|---|-------|---------------------|
| 1 | Identification of pest and diseases on major crops | 92.50 | I |
| 2 | Pesticides and their mode of action | 91.11 | II |
| 3 | Weed control chemicals usage and precautions | 89.72 | III |
| 4 | Plant protection equipment | 76.39 | XII |
| 5 | Agro chemical formulations and their correct usage | 81.67 | VII |
| 6 | Precautions and use of antidotes | 79.72 | X |
| 7 | Control of non-insect pests such as rats, birds, vertebrates, etc | 81.39 | VIII |
| 8 | Harmful effects on crops, humans and environment | 80.28 | IX |
| 9 | Pesticides residues and their management | 83.06 | VI |
| 10 | Ecological friendly pest and disease control products | 73.89 | XIV |
| 11 | Human protection equipment | 75.28 | XIII |
| 12 | Label claims | 72.78 | XV |
| 13 | Compatibility of different agro chemicals | 79.44 | XI |
| 14 | Growth regulators and promoters | 84.17 | V |
| 15 | Pesticides governing laws and regulations | 85.28 | IV |

Table 5. Training Needs on farm implements and machinery (n=120)

| S.No. | Training Aspect | TNI | Need Hierarch Index |
|-------|--|-------|---------------------|
| 1 | Latest farm implements and machinery | 86.67 | I |
| 2 | Maintenance of farm implements and machinery | 82.50 | II |

Table 6. Training Needs on other aspects (n=120)

| S.No. | Training Aspect | TNI | Need Hierarchy Rank |
|-------|---|-------|---------------------|
| 1 | Usage of advanced ICT tools and equipment | 78.33 | IX |
| 2 | Managerial skills | 79.44 | VII |
| 3 | Communication skills | 84.72 | II |
| 4 | Documentation skills such as records keeping, reporting, etc | 80.00 | V |
| 5 | Modern information sources | 79.72 | VI |
| 6 | Digital agricultural systems such as web portals, kiosks, etc | 78.89 | VIII |
| 7 | Field Extension methods | 81.39 | IV |
| 8 | Business licensing, renewals, taxation and billing | 85.28 | I |
| 9 | Agro inputs related Legal aspects | 82.50 | III |

Table 7. Training duration, preferred time and periodicity of training programmes (n=120)

| S.No. | Aspect | Response Categories | Frequency (f) | Percentage (%) |
|-------|--|---------------------|---------------|----------------|
| 1 | Duration of the programme | Less than one week | 23 | 19.17 |
| | | One-week | 53 | 44.17 |
| | | Two-weeks | 7 | 05.83 |
| | | One month | 26 | 21.67 |
| | | > 1 month | 11 | 09.17 |
| 2 | Preferred time for undergoing trainings | January | 5 | 04.17 |
| | | February | 12 | 10.00 |
| | | March | 39 | 32.50 |
| | | April | 18 | 15.00 |
| | | May | 15 | 12.50 |
| | | September | 14 | 11.67 |
| | | October | 8 | 06.67 |
| | | November | 7 | 05.83 |
| | | December | 2 | 01.67 |
| 3 | Periodicity of the training programme required | Once in a season | 46 | 39.17 |
| | | Once in a year | 62 | 51.67 |
| | | for every two years | 11 | 9.17 |

Training Needs on other aspects

Apart from the technical agricultural aspects, training in other aspects which aid them in running business successfully and its development were also identified. These include business licensing, renewals, taxation and billing (rank I), communication skills (rank II), agro inputs related legal aspects (rank III), field extension methods (rank IV), documentation skills (rank V), modern information sources (rank VI), managerial skills (rank VII), digital agricultural techniques such as web portals, information kiosks, etc (rank VIII) and use of

advanced ICT tools and devices (rank IX) (Table 6).

The results signify that updated knowledge on business licensing, renewals, taxation and billing were found to be highly required due to changing rules and regulations, taxation policies of the government. Communication skills were found important for effective communication with their clients *i.e.*, farmers for making their business more successful. Now-a-days, use of Information Technology with advanced communication tools such as web portals, blogs, web mails, online trading and

business, etc in agri business is invariable, and this warrants to conduct trainings on these aspects.

Duration, preferred time and periodicity of the trainings

Results indicated that the agri-input dealers opted for one-week training programmes (44.17%) followed by one-month duration (21.67%), less than one week (19.17%) and two weeks (05.83%) (Table 7). As the agri-input dealers are more engaged in their business activity, one-week duration programmes will be more suitable for them to attend.

Regarding preferred time for undergoing training programmes, more than one-fourth (32.50%) opined that the month of March is suitable for them to participate in the training programmes as it covers the lean period for crops, followed by April (15.00%), May (12.50%), September (11.67%) and February (10.00%) (Table 7).

Concerning periodicity of conducting training programmes, dealers preferred trainings once in a year (51.6%), once in a season (39.17%) and for every two years (9.17%) (Table 7). To update the knowledge of the agri-input dealers, trainings on various identified topics can be organized on yearly once basis at their suitable nearest locations.

CONCLUSION

The results revealed the major crops for which training required are rice, groundnut and

mango. The study identified many important training areas for agri input dealers that are required to be addressed on a priority basis in five major aspects of agriculture. Further, the study unearthed preferred duration as one week and preferred time of conducting training during the year is from February to April and periodicity for organizing trainings is once in every year. The identified areas in the study will support the training organizing institutes to redesign their training programmes with the identified training areas in an effective way rather than to conduct trainings on routine topics. To conclude, training the agri input dealers with right kind of training content at right time will strengthen the Para-Extension System.

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