

# A Study on Impact of “DAESI” Programme on Input Dealers in Andhra Pradesh

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## Introduction

The Public Extension service by itself is not enough to handle the multifarious demands of the farming community and is being supplemented by private extension through agribusiness companies, input dealers, NGOs, farmers' organizations, etc. About 2.8 lakh agri-input dealers are operating in rural areas in the country. Though not equipped with adequate knowledge, they have become one of the important sources of farm information to the farming community. At the all India level the input dealers stand second (13.1%) in accessibility to the farming community for providing information on modern technologies (NSSO-2003), first being the progressive farmers. Among the states the farm-households accessing information through 'input dealers' was highest in West Bengal (36%), followed by Andhra Pradesh (30%) and Gujarat (24%) (NSSO-2003).

The status of agri-input dealers in terms of knowledge and skills in agriculture is very alarming. No basic qualification is required for obtaining the license for dealing with fertilizers, pesticides and seeds, etc., The input dealers are basically businessmen without the background of agriculture, though occasionally they get orientation about the products from the respective manufacturers through leaflets and brochures supplied by the companies. But at the same time it is an important mechanism to reach out to the large number of farmers besides various extension systems and mass media.

The changing economic scenario coupled with diversified market demands and opportunities have resulted in diversification of farming systems,

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value addition through agro-processing and opening of multiple marketing challenges. It is very difficult to address the emerging issues through public extension system, alone which has more of production orientation. Hence there is a need to upgrade the knowledge of the agri-input dealers for their effective participation in agricultural development.

The present extension policy recognizes the role of a multi-agency dispensation comprising different strengths, which will promote private extension to operate in roles that complement, supplement and work in partnership with public extension. Keeping this in view MANAGE took a lead to start a Diploma Course on distance education mode of one year duration. The methodology adopted is distance education mode through supply of literature, classroom interactions, field visits and practical sessions, use of radio, television, CDs, and information technology. Interaction sessions are conducted on every Sunday (48 Sundays approximately) at the nodal institution with the help of experts in the concerned field. The contents covered are: Agro-climatic conditions, soils, crop production technologies in field crops, horticultural crops and vegetables, manures and fertilizers, plant protection methods, farm mechanization, extension, individual development, legal laws relating to agricultural inputs etc. The course content is mostly district specific highlighting the micro level situations at the district level. Eligible candidates should have at least passed 12th class. With this design, a Diploma Course on Agricultural extension for input dealers "DAESI" was launched on 6/7/2003 for the input dealers.

MANAGE pilot tested the DAESI with a batch of 27 input dealers of Ranga Reddy District and subsequently launched a second batch in the same year. The program was extended in other districts of Andhra Pradesh with three batches in 2004, seven batches in Andhra Pradesh and two batches in Tamil Nadu in 2005. In 2006 the program is being conducted in 10-batches in Andhra Pradesh and one batch each in Tamil Nadu and Maharashtra. A total number of 378 input dealers have been trained under DAESI and the diplomas awarded, and 495 input dealers are presently undergoing the program in Andhra Pradesh, Tamil Nadu and Maharashtra.

There is a steady increase in the number of DAESI programmes from 1 to 14 within a span of 2 years (from July 2003 to June 2005). This trend clearly shows that there is an enormous scope for further expansion of this programme in the country. The diploma holders have rendered their services to the farmers in both kharif and rabi in 2004 and 2005. Hence there is a need to observe the differences in their services to the targeted group. Keeping this in view a study on the impact of "DAESI" programme on input dealers was conducted with the following objectives.

1. To study the changes observed in the input dealers in rendering the extension services to the farmers.
2. To study the improvements in dealers' business.
3. To understand the recognition of the diploma holders.

## Methodology

Ex-post-facto research design was adopted for conducting the study since the variables chosen for the study had already occurred. Ranga Reddy district in Andhra Pradesh was purposively selected since the first and second batches of the program comprised of input dealers from this district. The dealers who were awarded diploma from MANAGE, Hyderabad and provided agricultural services for 1 to 3 agricultural seasons were selected. The total number of diploma holders of both first and second batches was 46 and since the population is homogeneous, 50 per cent of the population i.e., 23 dealers were taken as a sample for the study, covering rural & urban areas.

The data was collected by personal interview using a pre-tested questionnaire. The data thus collected from the questionnaire was coded, analyzed and tabulated. The results were interpreted meaningfully to draw valid conclusions and inferences. The data was computed and the statistical tests, percentage and mean values were used for analyzing the data.

## Findings

Keeping in view the specific objectives of the study, the empirical evidence obtained in terms of factual data were subjected to appropriate statistical tests and the results thus arrived are presented and discussed.

## I. Family occupation

The respondent's family occupation was analyzed and is presented in Table 1.

**Table 1: Family occupation of the respondents**

n = 23

| Sl.No | Family occupation      | No. of respondents | Percentage |
|-------|------------------------|--------------------|------------|
| 1     | Agriculture            | 10                 | 43.48      |
| 2     | Business               | 9                  | 39.13      |
| 3     | Agriculture & business | 4                  | 17.39      |
|       | Total                  | 23                 | 100.00     |

Over forty three per cent of the dealers had practicing agriculture followed by 39.13 per cent respondents with business. The remaining 17.39 per cent were from both practicing agriculture and business.

## 2. The inputs regularly sold by the dealers

As dealers the respondents deal with the major agricultural inputs like seeds, fertilizers, and pesticides. Along with the inputs they also sell bio-fertilizers and bio-pesticides. All these inputs were handled independently or in combinations as presented in Table 2.

**Table-2 : Different type of Inputs handled by the respondents**

n = 23

| Sl. No | Inputs                                                         | No. of Respondents | Percentage |
|--------|----------------------------------------------------------------|--------------------|------------|
| 1      | Seeds, fertilizers, pesticides, biofertilisers, bio-pesticides | 7                  | 30.42      |
| 2      | Seeds, fertilizers, pesticides, biofertilisers                 | 5                  | 21.73      |
| 3      | Fertilizers, pesticides, biofertilisers                        | 2                  | 8.7        |
| 4      | Seeds, pesticides, biofertilisers, bio-pesticides              | 2                  | 8.7        |
| 5      | Seeds                                                          | 2                  | 8.7        |
| 6      | Seeds, fertilizers, pesticides, bio-pesticides                 | 2                  | 8.7        |
| 7      | Seeds, fertilizers, biofertilisers, bio-pesticides             | 1                  | 4.35       |
| 8      | Seeds, fertilizers, pesticides                                 | 1                  | 4.35       |
| 9      | Seeds, pesticides, bio-pesticides                              | 1                  | 4.35       |
|        | Total                                                          | 23                 | 100.00     |

30.42 per cent of the respondents were dealing with a maximum of 5 agricultural inputs i.e. Seeds, fertilizers, pesticides, biofertilisers, and bio-pesticides, 21.73 per cent of the respondents in 4 agricultural inputs i.e. Seeds, fertilizers, pesticides, and biofertilisers and 8.7 per cent of the respondents handle only one input i.e. Seed. More than 50 per cent of the respondents were handling 4 - 5 agricultural inputs. Only 8.7 percent of respondents were dealing with only one single input.

### 3. Motivation to join in DAESI programme

The motivation of the sample dealers to undergo DAESI diploma are as indicated in Table 3.

**Table-3 : Motivation of the respondents to join DAESI Diploma**

n = 23

| Sl. No | Motivation                                          | No. of respondents | Percentage |
|--------|-----------------------------------------------------|--------------------|------------|
| 1      | To gain knowledge in agriculture                    | 7                  | 30.43      |
| 2      | To educate the farmers                              | 5                  | 21.74      |
| 3      | To give proper advice to the farmers                | 4                  | 17.39      |
| 4      | To serve farmers                                    | 3                  | 13.04      |
| 5      | To get aware of the problems in crops               | 2                  | 8.7        |
| 6      | To give better knowledge about agricultural systems | 2                  | 8.7        |
|        | Total                                               | 23                 | 100.00     |

Motivation of the dealers was to gain knowledge in agriculture (30.43 per cent), to educate the farmers (21.74 per cent), to give proper advice to the farmers (17.39 per cent) and to serve farmers (13.04 per cent) respectively. The two other reasons expressed by 8.7 per cent respondents each were to get awareness of the problems in crops and to give better knowledge about agricultural systems.

This shows that the dealers have the motivation to obtain agricultural information and a mind set to serve the farming community.

## 4. Changes observed in Business due to DAESI Programme

The changes observed in the dealers after undergoing the diploma with respect to development of contacts with fellow dealers in the district (network), maintenance of stock, extension of business and in incomes were examined and are presented below.

### 4.1. Development of Dealer's network

One of the objectives of DAESI programme was to bring business contacts among the input dealers of a district by upgrading the knowledge in agriculture, laws related to agriculture and business ethics over a period of time. Keeping this in view the dealer's network that could be established in the district may be seen in Table 4.

**Table 4: Status of Network developed by the respondents**

n = 23

| Sl.No | Status of network | No. of respondents | Percentage |
|-------|-------------------|--------------------|------------|
| 1     | Developed         | 14                 | 60.87      |
| 2     | Not developed     | 9                  | 39.13      |
|       | Total             | 23                 | 100.00     |

Over sixty per cent of the respondents said that the dealer's network could be established due to close association and continuous interactions held during the time of contact classes and during the common activities of the DAESI programme.

### 4.2 Activities developed through business network

Table 5 shows that the business network resulted in improving trust, , cooperation, exchanging of inputs, economic support, unity in dealing with companies by 28.57, 35.71, 28.57, 21.42, 35.71 per cent of the respondents respectively.

Thus, to conclude dealers of a district have developed networks for development of business. Before training they never thought of development of business with unity and ethics. Respondents expressed that the DAESI course facilitated them in development of business networks coupled with human relations.

**Table 5: Activities developed by the respondents through networks**

n = 14

| Sl. No | Activities                                                   | No.of respondents | Percentage |
|--------|--------------------------------------------------------------|-------------------|------------|
| 1      | Continuous contacts in classes helped in Trusting each other | 4                 | 28.57      |
| 2      | Cooperation of dealers was developed                         | 5                 | 35.71      |
| 3      | Exchanging of inputs when need arises                        | 4                 | 28.57      |
| 4      | Supporting economically                                      | 3                 | 21.42      |
| 5      | Coming to common understanding in dealing of companies.      | 5                 | 35.71      |

### 4.3. Changes made in stock maintenance method

In general, dealers were storing all the agricultural inputs in the same godown or in the same room, which had negative effects on germination of seed and to the human beings. In the DAESI programme the dealers were taught maintenance of the stock and ill effects of storing the inputs together in same godown or room in a detailed manner. After attending the DAESI course the maintenance of the stock by the dealers was analyzed and is presented in Table 6.

**Table 6: Change made in stock maintenance by the respondents**

n = 23

| Sl.No | Maintenance of the stock | No. of respondents | Percentage |
|-------|--------------------------|--------------------|------------|
| 1.    | Changes made             | 16                 | 69.57      |
| 2.    | Not made                 | 7                  | 30.43      |
|       | Total                    | 23                 | 100.00     |

69.57 per cent of the dealers made changes in maintaining the stock.

### 4.4. Activities undertaken in maintenance of the stock

After attending DAESI programme the dealers were undertaking the following activities in stock maintenance method.

**Table 7: Changes observed in respondents in maintenance of the stock**

n = 16

| S. No. | Activities                                                                                       | No. of respondents | Percentage |
|--------|--------------------------------------------------------------------------------------------------|--------------------|------------|
| 1      | Seeds and pesticides were kept separately                                                        | 14                 | 60.87      |
| 2      | Not selling invalid seeds and fertilizers                                                        | 13                 | 56.52      |
| 3      | Fungicides and pesticides were kept separately                                                   | 9                  | 39.13      |
| 4      | Seeds and fertilizers were kept separately (using separate godowns or keeping in separate shelf) | 8                  | 34.78      |

The stock were maintained by 60.87 percent dealers by keeping the seeds and pesticides separately, 56.52 per cent of dealers do not sell invalid seeds and fertilizers, 39.13 per cent of the dealers were keeping the fungicides and pesticides separately and 34.78 were keeping seeds and fertilizers separately (using separate shelves). Changes in maintaining the stock by the dealers is the result of the topics dealt in the course on seed germination, negative effects of mixing the stock of seed, fertilizers and pesticides. This indicates that the DAESI programme had made value addition in dealer's knowledge in maintaining seeds, fertilizers and pesticides.

#### 4.5. Changes made in stock as per environmental condition

The maintenance of the stock initiated by the dealers as per the environmental condition is presented in Table 8.

**Table 8: Maintenance of the stock by the respondents as per environment**

n = 23

| Sl. No | Stock as per environmental condition | No.of respondents | Percentage |
|--------|--------------------------------------|-------------------|------------|
| 1      | Maintained                           | 14                | 60.87      |
| 2      | Not maintained                       | 9                 | 39.13      |
|        | Total                                | 23                | 100.00     |

Sixty per cent of the respondents were maintaining the stock as per the environmental conditions.

**Table 9: Change in activities to maintain the stock as per environment**

n = 14

| Sl. No | Activities                                                                           | No.of respondents | Percentage |
|--------|--------------------------------------------------------------------------------------|-------------------|------------|
| 1      | The seed was kept in cool chambers in case of delayed monsoon to protect germination | 6                 | 42.86      |
| 2      | During heavy and prolonged rainy periods seed was stored in moist free places.       | 4                 | 28.57      |
| 3      | Bringing stock as and when required                                                  | 4                 | 28.57      |
|        | Total                                                                                | 14                | 100.00     |

42.86 per cent dealers have followed different methods in maintaining the stock based on environmental conditions i.e. keeping the seed in cool chambers in case of delayed monsoon, 28.57 percent dealers have been storing seed in moist free places and bringing the stock as and when required. These results reveal that the dealers have started maintaining the stock as per the climatic conditions and are in line with scientific recommendations and referring to “Vyavasaya Panchangam”.

#### 4.6. Initiation of business expansion

**Table 10: Initiation of business expansion by the respondents after DAESI**

n = 23

| S.No | Business extension | No. of respondents | Percentage |
|------|--------------------|--------------------|------------|
| 1    | Not initiated      | 18                 | 78.27      |
| 2    | Initiated          | 5                  | 21.73      |
|      | Total              | 23                 | 100.00     |

Only 21.73 per cent of the respondents have initiated steps to expand their business and 78.27 per cent have yet to initiate action to expand their business after DAESI programme (Table 10). Expansion of business in terms of number of villages and number of farmers has also been discussed further.

#### 4.7. Expansion of business in area by the dealers who have initiated

The average expansion in terms of villages was 3.4 and in terms of farmers

**Table 11 :Expansion of business in area initiated by the respondents**

n = 5

| S.No    | No of villages | No. of farmers |
|---------|----------------|----------------|
| 1       | 5              | 30             |
| 2       | 2              | 15             |
| 3       | 3              | 20             |
| 4       | 3              | 15             |
| 5       | 4              | 20             |
| Average | 3.4            | 20             |

covered were 20. Thus from the above two tables it is evident that the expansion of the business by the respondents has started but on a small scale. The other respondents who were not extending their business have stated that they were providing quality services, which ultimately paves the way for business expansion in the long run.

#### 4.8. Change in income level due to DAESI programme

All the dealers have expressed that their income levels did not change immediately (1-1.5 years) because of short period. The value-added services to the customers through proper advice and explanation slightly increased the number of clients. But the over all effect could be observed over time.. Respondents expressed that a slight change in turn over was observed. Hence the observation in income change has to be observed later.

#### 4.9. Confidence in dealing with the farmers

The most important stakeholder is the farmer. The number of dealers serving the farmers confidently after DAESI diploma is presented below.

**Table 12: Number of respondents serving the farmers with confidence**

n = 23

| S.No | Confidence    | No. of respondents | Percentage |
|------|---------------|--------------------|------------|
| 1    | Confident     | 18                 | 78.26      |
| 2    | Not confident | 5                  | 21.74      |
|      | Total         | 23                 | 100.00     |

78.26 per cent of the respondents were serving farmers confidently. The dealers expressed that their improved confidence was due to the knowledge gained in DAESI on location specific crop production technologies of different crops, classification of fertilizers and pesticides along with usage.

#### 4.10. Confidence in dealing with Business Company Executives

The confidence of the input dealers in dealing with the key stakeholder responsible for manufacturing agricultural inputs like seeds, fertilizers and pesticides was studied and is presented below.

**Table 13: Confidence of respondents in dealing with Business Executives**

n = 23

| S.No | Confidence    | No. of respondents | Percentage |
|------|---------------|--------------------|------------|
| 1    | Confident     | 23                 | 100.00     |
| 2    | Not confident | -                  | -          |
|      | Total         | 23                 | 100.00     |

100 percent of the respondents were confidently dealing with the input-manufacturing agencies. The dealers expressed that their confidence built up due to the lessons learnt in training on role of seed certification agency in production of quality seed, law of seeds, fertilizer control order and insecticide act.

#### 4.11. Confidence in dealing with Government Department officials

The Department of Agriculture is the main government agency involved in monitoring of maintenance of agricultural inputs by the dealers. The number of input dealers maintaining relations confidently with the Government department officials are detailed in Table 14.

**Table 14: Confidence of respondents in dealing with Government officials**

n = 23

| S.No | Confidence    | No.of respondents | Percentage |
|------|---------------|-------------------|------------|
| 1    | Confident     | 23                | 100.00     |
| 2    | Not confident | -                 | -          |
|      | Total         | 23                | 100.00     |

The dealers are confident in interactions with the government officials. They expressed that this was due to the lessons learnt in business ethics, skills and logics learned in writing stock books.

#### 4.12. Changes observed in Self Development

The number of dealers who observed change in themselves after attending the one year DAESI diploma is presented in table 15.

**Table 15: Changes observed in self development of the respondents**

n = 23

| S.No | Observation | No. of respondents | Percentage |
|------|-------------|--------------------|------------|
| 1    | Self change | 23                 | 100.00     |
|      | Total       | 23                 | 100.00     |

DAESI diploma holders have observed self-change. The respondents expressed that it was due to the knowledge gained in the classroom along with the discussions held with the experts during practical sessions held at other research and training institutions.

#### 5. Changes observed in activities

The changes observed by the diploma holders in their regular activities are detailed in table 16.

The major changes found in the respondents were improvement in their self-confidence in business and in giving technical knowledge to farmers by 100 percent. 65.22 percent of the respondents discharged their regulatory responsibilities and improved their relationship with other input dealers. 56.22 percent of the respondents developed networks with research and extension institutions and started analyzing the issues related to farming, respectively. One of the respondents expressed that *“earlier money was being used as a capital in business now technical knowledge along with money is used as capital”*. These changes are the result of DAESI.

The other changes made in their activities were in terms of improving

**Table 16: Changes observed by the respondents in their regular activities**  
n = 23

| S. No | Changes observed                                                                           | No. of respondents | Percentage |
|-------|--------------------------------------------------------------------------------------------|--------------------|------------|
| 1     | Improved self confidence in business                                                       | 23                 | 100.00     |
| a     | giving technical information to the farmers with the knowledge acquired in the course      | 23                 | 100.00     |
| b     | discharging regulatory responsibilities enjoined on him                                    | 15                 | 65.22      |
| 2     | Improving personal relationships with other dealers                                        | 15                 | 65.22      |
| 3     | Development of networks with other institutions (scientists, agriculture departments etc.) | 13                 | 56.52      |
| 4     | Analyses of issues                                                                         | 13                 | 56.52      |

personal relationships with other dealers (65.22 per cent) and development of networks with other institutions i.e scientists, agriculture departments etc. (56.52 per cent). 56.52 % started to analyse the issues. They felt that these relations were enriching them in information and business. More than 50 per cent of the respondents expressed that they were probing many issues in order to know details and use the information in their business.

The above results indicate that there was a change on the part of the dealers in self-related activities viz., in terms of giving technical information to the farmers and maintaining relationships with other dealers, scientists and officers for getting latest information in all the aspects. This clearly indicates that the lessons learnt in DAESI have brought a desirable change in dealers to perform the role of an extension service provider.

## 5. Recognition obtained from the stakeholders

Recognition of the DAESI diploma holder by the stakeholders like farmers, Business Company Executives and government officials was studied and is explained below.

### 5.1. Dealer's recognition by the farmers

Type of recognition to the respondents from farmers after DAESI diploma is in Table 17.

**Table 17: Recognition of the respondents by the farmers** n = 23

| S. No | Recognition                                 | No.of respondents | Percentage |
|-------|---------------------------------------------|-------------------|------------|
| 1     | As a crop doctor                            | 15                | 65.22      |
| 2     | Dealer + extension worker                   | 12                | 52.17      |
| 3     | Dealer + extension worker + credit provider | 10                | 43.48      |
| 4     | As an extension worker                      | 8                 | 34.78      |

65.22 per cent of the farmers recognized the diploma holder "As a Crop Doctor", others being "Dealer + Extension Worker" by 52.17per cent, "Dealer + Extension worker + Credit Provider" by 43.48 per cent, "Dealer + Extension worker + Credit Provider" by 43.48 per cent and as an Extension Worker by 34.78 per cent.

It is clear from the above results that the farmers recognized the dealers as a supplement to extension workers .

### 5.2. Recognition of the dealers by the Manufacturing Companies

The Manufacturing Company representatives are recognizing the input dealers in the following ways.

**Table 18: Recognition of the respondents by the Manufacturing Companies** n = 23

| S. No | Recognition                                                              | No. of respondents | Percentage |
|-------|--------------------------------------------------------------------------|--------------------|------------|
| 1     | A dealer with technical knowledge in agriculture                         | 15                 | 65.22      |
| 2     | A dealer with basic knowledge in ingredients of fertilizers & pesticides | 13                 | 56.52      |
| 3     | A dealer managing the stock as per seasonal needs                        | 9                  | 39.13      |

65.22 per cent of the respondents were recognized as “Dealers With Technical Knowledge in Agriculture” followed by “ Dealer With Basic Knowledge in Ingredients of Fertilizers and Pesticides” by 56.52 per cent and “Dealer Managing the Stock as Per the Seasonal Needs” by 39.13 per cent of the company representatives.

This indicates that the Manufacturing Company representatives have recognized the knowledge gained by the respondents both technical knowledge in agriculture and basic knowledge of the composition of pesticides. This clearly shows that the inputs given during the course had a strong impact on the enhancement of knowledge of the respondents.

### 5.3. Recognition of the dealers by the Government officials

The Government officials recognized the dealers after getting diploma in different ways as presented in Table 19.

**Table 19: Recognition of the respondents by the Government officials**

n = 23

| Sl. No | Recognition                                                          | No. of respondents | Percentage |
|--------|----------------------------------------------------------------------|--------------------|------------|
| 1      | As a dealer having knowledge in laws relating to agricultural inputs | 17                 | 73.91      |
| 2      | A dealer with technical knowledge in agriculture                     | 13                 | 56.52      |
| 3      | As a Para extension worker                                           | 6                  | 26.09      |

73.91% of the respondents said that the Government Officials have recognized them as dealers having knowledge in laws relating to agricultural inputs. 56.52 % dealers said the officials have recognized their technical knowledge in agriculture. 26.09 per cent of the respondents said their extension services were recognized. The results concluded that the government officials recognized the dealers, more as knowledgeable dealers in technical aspects of agriculture and laws related to agricultural inputs rather than as para extension workers.

## **6. Extension Activities of the Dealers As “DAESI” Diploma Holders**

Extension services by “DAESI” diploma holders are discussed here both in terms of giving advice to the farmers, taking up field visits to the farmers fields and the feed back mechanism followed by the respondents.

### **6.1. Extension Services**

Extension services under taken by the DAESI diploma holders

DAESI diploma holders are providing extension services in addition to the selling of seed. One of the important extension service provided by 34.78 per cent of the dealers is giving seed as per the recommended seed rate. The other extension service rendered by 17.39 per cent respondents is supplying quality seed with resistance to pests and diseases.

26.09 % of the respondents are advising farmers on timely application of fertilizers i.e., in use of fertilizers. 17.39 per cent respondents are recommending fertilization based on soil test reports and climate. With regard to plant protection measures 26.09 per cent of the respondents are recommending pesticides based on pest damage and its intensity i.e., only after a thorough diagnosis. 17.39 per cent respondents were found to be educating the farmers on Integrated Pest Management (IPM) and proper plant protection measures.

In addition to the extension services on inputs, the dealers are also advising farmers on conservation of moisture, crops suitable to the area, information on inter crops, subsidies, SRI cultivation etc. It can be concluded that the dealers after DAESI programme were fulfilling extension function in dissemination of information not only in critical inputs but also in other activities like conservation of moisture, SRI cultivation, information on subsidies etc.

### **6.2. Field Visits by “DAESI” diploma holders**

The dealers after attaining the diploma have started supplementing the role of extension workers. The initiation and attempts made by the dealers in visiting the farmer’s fields is studied and presented below.

**Table –20: Extension services undertaken by the respondents**

n = 23

| Sl. No                                          | Extension services                                                           | No.of dealers | Percent |
|-------------------------------------------------|------------------------------------------------------------------------------|---------------|---------|
| <b>Seeds</b>                                    |                                                                              |               |         |
| 1                                               | Giving seed as per the recommended seed rate                                 | 8             | 34.78   |
| 2                                               | Supplying pest & disease resistant varieties                                 | 4             | 17.39   |
| 3                                               | Providing quality seed                                                       | 4             | 17.39   |
| 4                                               | Advising farmers on seed treatment                                           | 2             | 8.7     |
| 5                                               | Providing information on hybrid seed                                         | 2             | 8.7     |
| <b>Fertilizers</b>                              |                                                                              |               |         |
| 1                                               | Advising farmers on timely application of fertilizers                        | 6             | 26.09   |
| 2                                               | Recommending fertilizers based on soil test reports (if cards are available) | 4             | 17.39   |
| 3                                               | Giving recommended dose of fertilizers based on climate                      | 4             | 17.39   |
| 4                                               | Giving information on bio-fertilizers                                        | 2             | 8.7     |
| <b>Micronutrients</b>                           |                                                                              |               |         |
| 1                                               | Advising farmers on identification deficiencies of micronutrients            | 4             | 17.39   |
| <b>Pesticides</b>                               |                                                                              |               |         |
| 1                                               | Recommending Pesticides based on diagnosis                                   | 6             | 26.09   |
| 2                                               | Explaining proper plant protection measures to the farmers                   | 4             | 17.39   |
| 3                                               | Educating farmers on IPM                                                     | 4             | 17.39   |
| <b>Recommending Pesticides based on climate</b> |                                                                              | 2             | 8.7     |
| 4                                               | Giving information on bio-pesticides                                         | 2             | 8.7     |
| 5                                               | Creating awareness on pheromone traps for monitoring of pests                | 2             | 8.7     |
| 6                                               | Educating farmers on spraying methods                                        | 2             | 8.7     |
| <b>Other extension services</b>                 |                                                                              |               |         |
| 1                                               | Suggestions in conservation of moisture                                      | 8             | 34.78   |
| 2                                               | Giving technical knowledge to the farmers                                    | 6             | 26.09   |
| 3                                               | Educating farmers on sowing methods                                          | 4             | 17.39   |
| 4                                               | Advising farmers for soil testing                                            | 2             | 8.7     |
|                                                 | Suggesting crops suitable to that area to farmers                            | 2             | 8.7     |
| 5                                               | Giving information on intercropping                                          | 2             | 8.7     |
| 6                                               | Providing information on subsidies                                           | 2             | 8.7     |
|                                                 |                                                                              |               |         |

**Table 21: Initiation and attempts made by the respondents in visiting the farmer's fields**

n = 23

| Sl.No | Visit to farmer's fields | No. of respondents | Percentage |
|-------|--------------------------|--------------------|------------|
| 1     | Initiated                | 19                 | 82.61      |
| 2     | Not initiated            | 4                  | 17.39      |
|       | Total                    | 23                 | 100.00     |

Visits to the farmer's fields were initiated by 82.61 percent of the respondents . Extension services initiated by the 19 dealers in extent of villages and the number of farmers they contact are discussed below.

The average number of villages visited by the dealers were 3.16. The average coverage of the farmers by the sample respondents was 29.21. The maximum coverage of the respondents was 50 in 4 villages and minimum coverage was 10 in two villages (Table 22).

This indicates that the dealers were encouraged with DAESI diploma and have started discussing technical issues with the farmers in the villages, spending time with the farmers to visit and discuss field problems along with financial transactions whenever they find time especially on holidays when their business is closed.

### 6.3. Feedback mechanism followed by the dealers

The feedback mechanisms adopted by the input dealers after the messages or inputs are given to the farmers are presented below.

The DAESI diploma holders were utilizing 3 different types of mechanisms for getting feed back from the farmers. More than 50 per cent of the sample respondents were utilizing the mechanism of general discussions with the farmers in the premises of the dealer whenever the farmers visit. 39.13 % were interacting with the farmers by visiting villages and 17.39 % of the respondents were interacting with rythumithra groups. Thus it can be concluded that the dealers after their diplomas are contributing significantly to extension services.

**Table 22: Extent of villages and the number of farmers contacted by the respondents**

n = 19

| Respondent | No of villages | No.of respondents |
|------------|----------------|-------------------|
| 1          | 3              | 18                |
| 2          | 4              | 40                |
| 3          | 4              | 26                |
| 4          | 4              | 40                |
| 5          | 4              | 34                |
| 6          | 2              | 10                |
| 7          | 4              | 50                |
| 8          | 4              | 40                |
| 9          | 2              | 25                |
| 10         | 2              | 20                |
| 11         | 3              | 25                |
| 12         | 4              | 45                |
| 13         | 3              | 30                |
| 14         | 2              | 20                |
| 15         | 4              | 35                |
| 16         | 2              | 12                |
| 17         | 4              | 40                |
| 18         | 3              | 20                |
| 19         | 2              | 25                |
| Total      | 60             | 555               |
| Average    | 3.16           | 29.21             |

**Table 23: Mechanism adopted to get feedback from the farmers**

n = 23

| Sl. No | Mechanisms                                                                                     | No. of respondents | Percentage |
|--------|------------------------------------------------------------------------------------------------|--------------------|------------|
| 1      | Through general discussions with the farmers in the premises of the dealer whenever they meet. | 12                 | 52.17      |
| 2      | Interacting with the farmers by visiting villages                                              | 9                  | 39.13      |
| 3      | Interacting with Rythumithra groups                                                            | 4                  | 17.39      |

## **7. Summary and Implications of the Study**

1. Nearly 70 per cent of the respondents had more than 10 years experience in handling inputs as businessmen and close relations have been developed with the farmers. The extension personnel can take the advantage of dealer's relation with farmers in transfer of technologies by keeping a close contact with them.
2. 60 per cent of the DAESI diploma holders had practicing agriculture background and their capacity building was done through the diploma programme, hence these dealers can be of much use in transferring of knowledge and skills to the farming community.
3. 90 per cent of the dealers are involved in selling 3-5 agricultural inputs. This gives a scope to the agricultural department to utilize them as Para Extension service provider in regulating inputs in the peak agricultural seasons.
4. The study revealed that 60 per cent of the sample respondents have developed business networks in the district, which was lacking before undergoing DAESI. This gives a scope to the extension machinery to utilize the network support for transfer of technologies.
5. After DAESI programme a majority of the dealers brought in changes in maintaining the stock based on weather and method. This indicates that the DAESI programme had build the capacity of the dealers to meet challenges in maintaining the stock technically as per weather.
6. The dealers were motivated in widening their role by disseminating the information not only for inputs but also in other activities like conservation of moisture, SRI cultivation, information on subsidies etc. The DAESI course has created an alternate channel for para extension services .
7. Government officials recognized the dealers, more as knowledgeable dealers in technical aspects of agriculture and laws related to agricultural inputs rather than as para extension workers.
8. The DAESI diploma holders were utilizing 3 types of feed back

mechanisms i.e general discussions with the farmers in the premises of the dealer, interacting with the farmers by visiting villages and meeting and discussing with Rythu-Mitra groups as Para professionals in agricultural extension activities. This gives scope to the Government departments (researchers and extension) to develop channels to take feedback from the dealers and utilize their services.

## **Reference**

A report on Access to Modern Technologies for Farming –2003, by National Sample Survey of India, Ministry of Statistics and Program Implementation, Govt. of India.