

## Communication Patterns of Research Personnel: A System Approach

U. A. BALASUBRAMANYAN<sup>1</sup> and K. RADHAKRISHNA MENON<sup>2</sup>

Researchers communicate the research finding to the extension personnel mainly through the University publications and journals followed by research seminars, extension personnel visiting the researchers and through national demonstration personnel. The researchers contact both small and big farmers and also progressive farmers and these farmers are contacted through farm visit, radio broadcast, field day lectures, advisory letters, leaflets and folders. Researcher extension personnel communication is not affected by other communication patterns of the researcher, but researcher farmer-Communication and Researcher Farmer Contact Span affected by other factors of the researcher.

The creation of knowledge through research and its communication is the foundation of scientific, technological and social progress of any nation. It is not the creation an innovation alone that is important but the dissemination or transfer of such innovation from the point of production to the point of utilization also plays a major role. In the process of modernizing agriculture three distinct systems are involved, viz., the Research System that creates new knowledge and innovations, the Client System consisting of the potential users of new knowledge and Extension System comprising of extension personnel performing the task of communication link between the Research and Client Systems (Coughenour, 1968). These three systems are equally important and their roles are complimentary to one another. In view of the close interrelationship

between the three systems, Rogers and Svenning (1969) pleaded for a system analysis of agricultural communication from the origin of the innovation to their final adoption by farmers. Consequently several studies have been made, notable were that of by Jain (1970), Lionberger and Chang (1970), Akhouri (1973), Ambastha (1974) and Sanouria (1974). For the acceleration of the transfer of information, some questions that naturally arise to be answered are how Researchers communicate farm information to the Extension Personnel and farmers?, what is the degree of communication with them? etc.

A critical analysis of communication patterns of the research personnel might be of great use in identifying the ways and means of accelerating the flow of communi-

1 - 2 Department of Agricultural Extension, Tamil Nadu Agricultural University, Coimbatore - 641003.

cation from the source of production to the point of utilization for modernizing agriculture in the country.

### MATERIALS AND METHODS

This study was conducted in Coimbatore District of Tamil Nadu State during 1975-76. The Research System consisted of the Researchers of the Paddy Breeding Station of Tamil Nadu Agricultural University, as the study was confined to High Yielding Varieties of Paddy only. Twelve Researchers were selected and the required data were collected through a well structural questionnaire containing the various index items, such as

- (a) Researcher - Extension Personnel Communication Index.
- (b) Researcher - Farmer Communication Index.
- (c) Researcher - Farmer Contact Span Index.

#### Operationalization of concepts:

(a) Communication Pattern refers to the Communication behaviour of an individual which involves all such activities related to acquisition, processing and dissemination of agricultural information and are systemic or exhibit some form of regularity.

(b) Researcher-Extension Personnel Communication-refers to the degree to which an individual Researcher communicates information about high yielding varieties of paddy to the Extension Personnel of various categories through various methods and media at the intersystem level. The amount

of information was measured with the help of the Researcher-Extension Personnel Communication Index.

(c) Researcher - Farmer Communication refers to the degree to which an individual researcher communicates information about high yielding varieties of paddy to the farmers through various methods and media at the inter system level. The amount of information was measured with the help of Researcher-Farmer Communication Index.

(d) Researcher - Farmer Contact Span-It refers to the extent of variation in terms of degree of communication of Researcher with different categories of farmers in communicating technical information. This was measured with the help of Researcher-Farmer Contact Span Index.

Numerical scores were assigned to the items in the different indices. Because the items had different ranges and units of measurement, the raw scores of each item was converted into Z score by adopting.

$$Z \text{ Score} = \frac{\text{Raw Score} - \text{Mean}}{\text{Standard Deviation}}$$

The Z-score of all the items were summed up to get the different indices for individual Researcher. With the standardized scores, percentage analysis and multiple correlation were worked out.

### RESULTS AND DISCUSSION

(A) Researcher-Extension personnel communication:-

The differential use extent of sources and channels by the Researchers are furnished in the Table. I.

TABLE I. Percentage of Researchers using various channels

| Channels used                           | Respondents using |        |
|---|-------------------|--------|
|   | No.               | %      |
| University publications and Journals    | 12                | 100.00 |
| Research Seminars                       | 11                | 91.66  |
| Extension personnel visit to Researcher | 11                | 91.00  |
| National Demonstration personnel        | 11                | 91.66  |
| Visit to Extension personnel            | 6                 | 50.00  |
| Research Stations                       | 6                 | 50.00  |
| Telephone calls                         | 3                 | 25.00  |
| State level joint meeting               | 3                 | 25.00  |

The data reported in the above table reveal that almost all the Researchers had used more than one channel for communicating with the Extension personnel. But the most used channel was University publications and journals which is followed by Research Seminars, visit of Extension personnel to the Researcher and National Demonstration personnel. The other channels were used only by less number of Researchers occasionally.

(B) **Researcher - Farmer Communication:** The sources and channels used by Researchers to communicate with farmers are given in Table II.

It is seen from the data presented in Table II that the Researchers had used more methods and media for communicating technical information directly to farmers. Among the methods and media, Farm visit and Radio broadcasting were used by all the Research-

TABLE II. Percentage of Researchers using various channels to Communicate with farmers

| Channels used             | Respondents using |        |
|---------------------------|-------------------|--------|
|                           | No.               | %      |
| Farm visit                | 12                | 100.00 |
| Radio Broadcast           | 12                | 100.00 |
| Field day lecture         | 11                | 91.66  |
| Leaflets and folders      | 10                | 83.33  |
| Advisory letters          | 10                | 83.33  |
| Farm Journals             | 9                 | 75.00  |
| Farmers Training meetings | 8                 | 66.66  |
| Office calls              | 8                 | 66.66  |
| Demonstrations            | 7                 | 58.33  |
| Telephone calls           | 6                 | 50.00  |
| Home visit                | 4                 | 33.33  |
| General meetings          | 4                 | 33.33  |
| Circular letters          | 3                 | 25.00  |
| Film show                 | 1                 | 8.33   |

ers, field day lecture by 91.66 per cent, leaflets and folders and advisory letters by 83.33 per cent of Researchers. The other methods and media were used only by less number of Researchers in the order given in the Table.

**C. Researcher-Farmer Contact Span:** With a view to find out the types of farmers contacted by the Res-

TABLE III. Percentage of Researchers communicating with different types of farmers

| Types of farmers contacted           | Respondents contacting |        |
|--------------------------------------|------------------------|--------|
|                                      | No.                    | %      |
| Farmers visiting Research Stations   | 12                     | 100.00 |
| Progressive farmers                  | 11                     | 91.66  |
| Small farmers                        | 11                     | 91.66  |
| Farmers with large holdings          | 11                     | 91.66  |
| Demonstrating farmers                | 10                     | 83.33  |
| Opinion leaders                      | 8                      | 66.66  |
| Farmers undergoing training          | 7                      | 58.33  |
| Members of Farmers Discussion Groups | 6                      | 50.00  |
| Influential farmers                  | 5                      | 41.0   |
| Panchayat members                    | 2                      | 16.6   |
| Members of Cooperative organization  | 1                      | 8.3    |

Researchers, the R-F contact Span Index was worked out and the results are presented in Table III.

The data in the table reveal that the maximum contact of Researchers was with the farmers visiting the Research station. Both small and big farmers were also contacted by the Researchers. Very few Researchers had contacts with Panchayat Presidents and Members of Co-operative organizations in the villages. There was no discrimination between small and big farmers by the Researchers as far as their contacts were concerned. Though Farmers Discussion Groups are very active in the district the contact between the members of these groups and the Researchers was not much.

**D. Variations in Researcher Communication Patterns explained:** Multiple correlation was worked out to explain the variation in Researcher communication with Extension personnel and farmers and the Researcher Farmer Contact Span. The R-values were tested for significance.

|  | R-Value   |
|--|-----------|
| (1) Effect of Research- Farmer Communication Researcher - Farmer Contact span and Researcher Information processing on Researcher-Extension Personnel Communication  | 0.074 N.S |
| (2) Effect of Researcher-Farmer contact span, Researcher-Extension Personnel Communication, and Researcher Information processing on Researcher-Farmer Communication | 0.924**   |
| (3) Effect of Researcher-Extension Personnel Communication, Researcher Information process-  |           |

ing on Researcher-Farmer contact span

0.888\*\*

From these R-values, it is seen that the Researcher-Extension Personnel Communication was not affected by the Researchers' other patterns of communication. But the Researcher-Farmer communication was influenced significantly by the other factors. So also the Researcher - Farmer Contact Span was affected by other factors of the Researcher.

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