*Indian Journal of Extension Education*
*Vol. 55, No. 2 (April-June), 2019, (31-34)*

# Extension Agency Contact and Technology Sharing among Trainee and Non-trainee Layer Farmers

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## ABSTRACT

The study was conducted to assess the extent of extension agency contact and technology sharing among layer farmers. For investigation equal (54) numbers of trainee and non-trainee layer farmers were selected from five different agro-climatic zones (out of nine) of state UP. Thus, total sample size was 108. These were measured by data collected through mailed questionnaire and telephonic survey. The study revealed that for trainee layer farmers, CARI (Central Avian Research Institute) was first choice and frequently contacted extension agency followed by Venkys and SDAH (State Animal Husbandry Department). While, for non-trainee layer farmers, SDAH was contacted more oftenly, followed by KVKs and Venkys. In case of technical sharing, about 72.23 per cent of trainee layer farmers had low level (<6 farmers) of technology sharing among farmers. About 14.81 per cent of layer farmers had medium (7-13 farmers) and rest (12.96%) were having high (>14 farmers) level of technology sharing. While, in case of non-trainees, huge majority (85.18%) of layer farmers were belonging to low level, followed by medium (9.26%) and high (5.56%) level of technology sharing among farmers. The average technology shared among farmers of the trainee and non-trainee layer farmers were 5.27 and 5.17, respectively. Technology sharing was higher in trainee layer farmers. This might be due to their high knowledge and adoption level, high socio-economic status due to training which makes them early adopters.

**Keywords**: Adoption, Extension agency, Knowledge, Layer farmers, Technology

## INTRODUCTION

Eggs are economical source of high-quality protein, vitamins and minerals, while egg yolk contains additional cholesterol, fat-soluble vitamins and essential fatty acids. Poultry sector in India is valued at about Rs. 80,000 crores (2015-16) broadly divided into two sub-sectors – one with a highly organized commercial sector with about 80 per cent of the total market share (say, Rs. 64,000 crore) and the other being unorganized with about 20 per cent of the total market share of Rs. 16,000 Crore. About 79 per cent egg production done through commercial farm and rest 21 per cent were done by backyard poultry farms. (Annual Report, DAHD&F, GoI, 2017-18). About 95 billion of eggs are produced from 260 million layers (BAH&FS, 2018). Layer farming in India has reached remarkable growth with the average growth rate of 8 to 10 per cent per year (Chatterjee and Rajkumar, 2015). The annual per capita availability also increased to 74 eggs. However, it is far below the recommended level of consumption of 180 eggs per annum by Indian Council Medical Research. At present scenario, the Indian poultry sector has assumed much focus due to the growing demand for poultry products particularly in urban areas because of their high food value. Most of the urban and rural population have been nourishing themselves with

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eggs and meats. Fowls, Ducks and Turkey are the three common poultry birds, reared either for egg production (i.e. layer birds, 86.99 per cent egg production by improved fowl, 11.83 per cent by desi fowl, 0.91 per cent by desi duck and 0.26 per cent by improved duck) or for meat production (broiler birds). Considering the economic importance of poultry sector in the country, there is a huge potential for it to grow further. In most of the developing countries, extension service serves as a major source of information to the farmers. However, farmers do not get information specific for their agricultural activities due to various reasons one of them being failure to meet the extension agents (Wakhungu 2010). The situation hinders poultry productivity and reduces their contributions to the agriculture sector and to the achievement of broader economic and social development goals. Layer farmers share technical knowledge to the other farmers by motivating them to adopt the layer farming, further helping them in establishing the farm. Given the above scenarios, an intervention which complemented extension agencies contacts used, and technology sharing by layer farmers was done in state UP.

## METHODOLOGY

A field survey comprising of 108 layer farmers was carried out in five agro-climatic zones of state Uttar Pradesh to assess the impact of layer farming training programme. The respondents (trainee layer farmers) were belonging to 5 agro-climatic zones out of 9 agro-climatic zones. As far as zone wise distinction of trainees is concerned, twelve, three, seventeen, eleven and eleven trainee layer farmers were from mid-western zone, Western plain zone, mid-plain zone, north eastern plain zone and eastern plain zone, respectively. Equal number (54) of non-trainee layer farmers was selected from same agro-climatic zone as respondents. Thus, total sample size was 108. For study, a mailed questionnaire and interview schedule was developed for data collection. Personal interview, direct observation and telephonic survey were used to collect data from the respondents. The collected data were compiled, tabulated and analysed by using standard statistical procedures and meaningful inference and conclusions were drawn out. Extension agency channels were divided into two categories personal localite sources and cosmopolitan based on their origin. This was measured by direct questioning and responses were given scores like 2, 1 and 0 for often, occasionally and never, respectively. Ranks were given with the help of weighted mean scores. Findings of technology sharing were represented in terms of frequency and percentage.

$$\text{Weighted mean score} = \frac{X(2)+Y(1)+Z(0)}{X+Y+Z}$$

Where, X = Number of respondents who contacted an extension agency 'often'

Y = Number of respondents who contacted an extension agency 'occasionally'

Z = Number of respondents who contacted an extension agency 'never'

## RESULT AND DISCUSSION

### Socio-personal profile

Majority 44.44 per cent of layer farmers were belonging to middle (37-46 years) age, followed by young and old (27.78% each) age group. Deka *et al.* (2013) also reported similar findings as 49.00 per cent of the respondents were belonged to middle, followed by young (45%) and old (6%) age group. Majority (80.56%) of the layer farmers had education up to graduate and above, followed by higher secondary (13.89%) and high school level (5.55%) education. None of the layer farmer was middle, primary, functional literate or illiterate. Thorat (2005) also reported similar trends that nearly two-fifth (39.09%) of the poultry entrepreneurs were had college level education, followed by higher secondary (34.55%), secondary level education (19.09%) and high school level (7.27%). Majority (73.14%) of layer farmers professed poultry as primary occupation, followed by agriculture (9.26%), government job & animal husbandry (5.56% each), business (3.70%) and other (2.78%). While, agriculture was secondary occupation for half of the layer farmers (50%), followed by animal husbandry (41.67%) and other (8.33%) occupation. The 'other occupation' includes that aquaculture, architecture, egg trading and beauty parlour. About 36.00 per cent of layer farmers were belonging to small land holding, followed by marginal (34.26), medium (21.30%), landless (7.40%) and large

(0.93%) categories. Overwhelming majority (95.24%) of layer farmers had low level of experience in poultry farming, followed by medium and high (both 2.38%) experience in poultry farming. The mean poultry farming experience of layer farmers was 5.11 years.

**Extension agency contact**

The data given in Table 1 reveals that the trainee layer farmers contacted to CARI, was "oftenly" by 72.22 per cent farmers at rank I , followed by Venkys ("oftenly", 72.22%, II rank), SDAH "oftenly" (55.56%, III rank) and KVKs occasionally (75.93%, IV rank), NGOs and cooperatives societies were never used by trainee layer farmers. While, in case of non-trainee layer farmers, SDAH "oftenly" (90.74%, I rank), followed by KVKs ("occasionally", 61.11%, II rank) and Venkys ("oftenly", 50.00%, III rank), CARI, NGOs and cooperatives societies were never used by non-trainee layer farmers. On overall basis, majority (73.15%) of layer farmers contacted to SDAH "oftenly", followed by Venkys ("oftenly", 72.22%), CARI (36.11%, "oftenly") and KVKs ("occasionally" 68.51%). Rank wise, SDAH was at ranked I, followed by Venkys (II) KVKs (III), CARI (IV) and NGOs and cooperatives societies (V). It is obvious from above data that CARI was utilized often by overwhelming majority (92.59%) of trainee layer farmers, while the entire non-trainee layer farmer never utilized CARI as an extension agency. Venkys was highly utilized by trainee layer farmers (72.22%) as compare to non-trainee (50.00%) layer farmers. It may be inferred from the results that majority of non-trainees are more efficiently connected to SDAH and KVK than trainees, while trainees were getting information from CARI more efficiently. All the respondents were found to contacting to one or more extension agencies. Babu (2013) also reported similar trends that about 18.33 per cent of respondents were contacted the State Department of Animal Husbandry (SDAH), followed by CARI (16.67%), other universities (16.67%) and IVRI (6.67%). None of the layer farmers ever contacted NGO or cooperative society for getting information about layer farming.

**Technology sharing**

The data given in Table 2 reveals that majority (72.23%) of trainee layer farmers were belonging to low

**Table 1: Distribution of trainee and non-trainee layer farmers according to extension agency contact**

| Agency | Trainees (n=54) | | | | | Non-trainees (n=54) | | | | | Pooled (n=108) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Often | Occasionally | Never | WM | Rank | Often | Occasionally | Never | WM | Rank | Often | Occasionally | Never | WM | Rank |
| SDAH | 30 (55.56) | 8 (14.82) | 16 (29.62) | 1.30 | III | 49 (90.74) | 5 (9.26) | 0 (0.00) | 1.91 | I | 79 (73.15) | 13 (12.04) | 16 (14.81) | 1.64 | I |
| KVK | 13 (24.07) | 41 (75.93) | 0 (0.00) | 1.24 | IV | 21 (38.89) | 33 (61.11) | 0 (0.00) | 1.39 | II | 34 (31.49) | 74 (68.51) | 0 (0.00) | 1.36 | III |
| CARI | 39 (72.22) | 13 (24.08) | 2 (3.70) | 1.68 | I | 0 (0.00) | 0 (0.00) | 54 (100) | 0 | IV | 39 (36.11) | 13 (12.03) | 56 (51.86) | 0.88 | IV |
| VENKY | 39 (72.22) | 7 (12.97) | 8 (14.81) | 1.57 | II | 27 (50.00) | 17 (31.49) | 10 (18.51) | 1.31 | III | 66 (61.11) | 24 (22.22) | 18 (16.67) | 1.50 | II |
| NGO | 0 (0.00) | 0 (0.00) | 54 (100) | 0 | V | 0 (0.00) | 0 (0.00) | 54 (100) | 0 | IV | 0 (0.00) | 0 (0.00) | 108 (100) | 0 | V |
| Cooperative society | 0 (0.00) | 0 (0.00) | 54 (100) | 0 | V | 0 (0.00) | 0 (0.00) | 54 (100) | 0 | IV | 0 (0.00) | 0 (0.00) | 108 (100) | 0 | V |

**Table 2: Distribution of trainee and non-trainee layer farmers according to technology sharing**

| Technology sharing (numbers) | Trainees (n=54) | Non-trainees (n=54) | Pooled (n=108) |
|---|---|---|---|
| Low (up to 6) | 39 (72.23) | 46 (85.18) | 86 (79.62) |
| Medium (7-13) | 8 (14.81) | 5 (9.26) | 13 (12.03) |
| High (14 and above) | 7 (12.96) | 3 (5.56) | 9 (8.33) |
| Mean±SE | 5.27±1.17 | 5.17±0.65 | 5.29±0.59 |

level (<6 farmers) category of technology sharing followed by medium (14.81%) and high (12.96%) category. While, in case of non-trainees, huge majority (85.18%) of layer farmers were belonging to low level category of technology sharing among farmers followed by medium (9.26%) and high (5.56%) level of categories. All together, huge majority (79.62%) of the layer farmers were belonging to low level category of technology sharing among farmers followed by medium (12.03%) and high (8.33%) level of categories. However, the proportion of trainee layer farmers in medium (14.81%) and high (12.96%) categories was higher as compared to medium (9.26%) and high (5.56%) categories of non-trainee layer farmers. Technology sharing was higher in trainee layer farmers. This might be due to their high knowledge and adoption level, high socioeconomic status due to training which makes them early adopters. The pooled data reveals that the mean of technology shared farmers was 5.29. The average technology shared among farmers of the trainee and non-trainee layer farmers were 5.27 and 5.17, respectively.

## CONCLUSION

Layer farming is being professed by middle and old aged farmers having graduate and post graduate education, small land holding and layer farming as primary occupation. CARI was mostly utilized by trainee layer farmers as they got training from there. Non-trainees had correspondence mainly with the state animal husbandry department's officials. Other than these two, KVK and private organisation Venkys were the most contacted extension agencies. There was negligible role of NGO and cooperative societies regarding information provisioning about layer farming. Layer farmer's shares technology to other farmers more efficiently than non-trainees. So, need based trainings should be organized for non-trainee layer farmers by CARI also to bring them as far with trainee layer farming.

*Paper received on : April 07, 2019*

*Accepted on : April 25, 2019*

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