Volume-3, Issue-7, July-2014 • ISSN No 2277 - 8160

Research Paper | Veterinary Science

Prediction of Independent Variables Contributed for Maximum Variation in ICT Utilization of Commercial Poultry Farmers of Andhra Pradesh

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ABSTRACT

The step down multiple regression analysis revealed that independent variables viz. knowledge on ICT, information seeking behavior, rationality in decision-making and scientific orientation explained 66.20 per cent variation in ICT utilization by layer farmers. The variables viz. knowledge on poultry production, socio economic status, information seeking behaviour, knowledge on ICT, economic motivation, management orientation, and achievement motivation explained 75.00 per cent variation in ICT utilization among broiler farmers. In case of total farmers, the variables such as knowledge on ICT, information seeking behavior, scientific orientation and knowledge on poultry production contributed to 58.60 per cent variation. Step down regression analysis found that variables viz. 'knowledge on ICT, rationality in decision-making, achievement motivation, poultry farm size and management orientation' accounted for 71.50 per cent variation among layer farmers. The variables viz. knowledge on poultry production, socio economic status, information seeking behaviour, knowledge on ICT and achievement motivation explained 73.10 per cent variation among boiler farmers. In case of total farmers, poultry farm size, rationality in decision making, achievement motivation and management orientation contributed to 65.60 per cent variation.

KEYWORDS :

RESULTS

REGRESSION ANALYSIS

The data subjected to regression analysis to find out variables, which are significantly contributing to dependent variables.

. Prediction of independent variables contributed for maximum variation in ICT utilization of commercial poultry farmers.

Step down Regression Analysisdone to predict independent variables accounted for maximum variation in ICT utilizationof commercial poultry farmers as presented in

MATERIAL AND METHOD

RESEARCH DESIGN

Ex-post facto design adopted for the present study since the variables chosen have occurred. According to Kerlinger(1978) Ex-post facto research design is defined as systematic and empirical enquiry in which the researcher does not have control over independent variables because their manifestation already or they are inherently not manipulated.

LOCALE OF THE STUDY

The state of Andhra Pradesh was chosen purposively for the study as the researcher is familiar with local language that could definitely help the researcher to build good and quick rapport and facilitates in depth study through careful observations.

SAMPLING PROCEDURE

Location of Regions

The present study was carried out in three regions of the state i.e. Telangana, Costal Andhra, Rayalaseema of Andhra Pradesh state and one district from each of region with highest poultry population (both in layers and broilers) was selected purposively.

Selection of Districts

Three districts viz. Rangareddy, Chittoor and East Godavari of Andhra Pradesh were selected for the study based on highest poultry population i.e layers and broilers. The map showing Andhra Pradesh state with study area was depicted in the fig.1.

Selection of Respondents: From each district 40commercial poultry farmers in equal number of 20 layer farmers and 20 broiler farmers were selected randomly. Thus a total 120 respondentsfrom three districts were chosen for the study.

Step down multiple regression analysis at last step predicting the influence of selected independent variables on ICT utilization of commercial poultry farmers

S.No	Variable no	Independent variable	'b'	SE	't' value
Layer Farmer					
1	X_3	Knowledge on ICT	3.151	1.216	2.685*
2	X_8	Information seeking behaviour	1.989	0.782	3.506*
3	X_{10}	Rationality in Decision Making	3.120	1.845	1.691NS
4	X_{13}	Scientific orientation	6.274	1.925	3.206**
	R^2 = 0.662		F value= 8.820**		
Broiler Farmers					
1	X_2	Knowledge on poultry production	2.105	2.532	3.987**
2	X_3	Knowledge on ICT	2.524	0.970	3.602*
3	X_5	Socio economic status	2.263	0.981	2.898**
4	X_8	Information seeking behaviour	7.390	0.786	2.992**
5	X_9	Economic motivation	6.114	2.624	2.853*
6	X_{11}	Achievement motivation	2.671	1.478	1.928NS
7	X_{12}	Management orientation	8.042	2.877	3.135*
	R^2 = 0.75		F value= 7.185**		
Total Farmers					
1	X_2	Knowledge on poultry production	2.847	1.488	1.913NS
2	X_3	Knowledge on ICT	2.435	0.785	3.104**
3	X_8	Information seeking behaviour	2.383	0.583	4.089**
4	X_{13}	Scientific orientation	4.734	1.521	3.113**
	R^2 = 0.586		F value= 13.375**		

*** Significant at (P<0.05)**
**** Significant at (P<0.01)**
NS Non significant

Layer farmers
A cursory look at the table indicated that among layer farmers, four variables explained 66.20per cent variation in ICT utilization by commercial poultry farmers. The variance ratio (8.820) found to be significant ($p \leq 0.01$). The variables knowledge on ICT and information seeking positively and significantly contributed at 5% level of probability; whereas scientific orientation significantly contributed at 1% level of probability. Rationality in decision making was non- significantly contributed to the variation in ICT utilization.

Broiler farmers
Among broiler farmers, seven independent variables accounted for 75 per cent variation in ICT utilization. The F calculated value (7.185) found to be significant. The positively and significantly contributing variables at 5% level of significance were knowledge on poultry production, socio economic status. Knowledge on ICT, information seeking behavior, economic orientation and management orientation were significant at 1% level of probability. Achievement motivation was positively and non significantly contributed for variation in ICT utilization by broiler farmers.

Total farmers
About 58.6 per cent of variation in ICT utilization of total farmers was contributed by four variables. Out of these, knowledge on ICT, information seeking behavior, scientific orientation were positively and significantly ($p \leq 0.01$) contributed for variation, where as knowledge was positively and non-significantly contributed to the variation in information need of total farmers. The F value (13.475) for R^2 was significant ($p \leq 0.01$).

Based on the results the null hypothesis rejected and concluded that the data supported the original proposition.

Prediction of independent variables contributed for maximum variation in farming performance of commercial poultry farmers.

Step down regression analysisdone to predict the independent variables accounted for maximum variation in farming performance of commercial poultry farmers as presented in Table 24.

Step down multiple regression analysis at last step predicting the influence of selected independent variables on farming performance of commercial poultry farmers

S.No	Variable no	Independent variable	'b'	SE	't' value
Layer farmers					
1	X_3	Knowledge on ICT	3.897	1.616	2.685*
2	X_7	Poultry Farm size	4.321	2.314	4.102**
3	X_{10}	Rationality in Decision Making	2.985	1.995	1.977*
4	X_{11}	Achievement Motivation	2.138	0.782	2.506*
5	X_{12}	Management orientation	6.274	1.925	3.206**
	R^2 = 0.715		F value= 10.820**		
Broiler farmers					
1	X_2	Knowledge on poultry production	4.105	2.658	3.885**
2	X_3	Knowledge on ICT	2.858	0.975	3.508*
3	X_5	Socio economic status	3.263	1.981	3.898**
4	X_8	Information seeking behavior	6.390	1.281	3.112**
5	X_{11}	Achievement Motivation	6.114	2.624	2.853*
	R^2 = 0.731		F value= 9.845**		
Total farmers					
1	X_3	Knowledge on ICT	2.847	1.488	1.913NS
2	X_7	Poultry Farm size	2.435	0.785	3.104**
3	X_{10}	Rationality in Decision Making	2.383	0.583	4.089**
4	X_{11}	Achievement Motivation	3.734	1.321	3.005**
5	X_{12}	Management orientation	3.658	1.821	3.452**
	R^2 = 0.656		F value= 12.175**		

*** Significant at (P<0.05)**
**** Significant at (P<0.01)**
NS Non significant

Layer Farmers
A cursory look at the table indicated that among layer farmers, five variables explained 71.50per cent variation in farming performance of the commercial poultry farmers. The variance ratio (10.820) was found to be significant ($p \leq 0.01$). The variables knowledge on ICT, rationality in decision making, achievement motivation were positively and significantly contributed at 5% level of probability; whereaspoultry farm size and management orientation significantly contributed at 1% level of probability.

Broiler Farmers
Among broiler farmers, fiveindependent variables accounted for 73.10 per cent variation in farming performance. The F calculated value (9.845) was found to be significant at 1% level of probability. The positively and significantly contributing variables were knowledge on ICT ($p \leq 0.05$), knowledge on poultry production, socio economic status, information seeking behaviour($p \leq 0.01$) and achievement motivation ($p \leq 0.05$).

Total Farmers
About 65.6 per cent of variation in farming performance of total farmers was contributed byfive variables. Out of these, poultry farm size, rationality in decision making, achievement motivation and management orientation were positively and significantly ($p \leq 0.01$) contributed for variation, where as knowledge on ICT was positively and non-significantly contributed to the variation in farming performance of total farmers. The F value (12.175) for R^2 was significant ($p \leq 0.01$).

Based on the results the null hypothesis rejected and concluded that the data supported the original proposition.

DISCUSSION

REGRESSION ANALYSIS

The data subjected to regression analysis to find out the variables that are significantly contributing to maximum variation in dependent variables.

. Prediction of independent variables contributed for maximum variation in ICT utilization of commercial poultry farmers.

Layer Farmers
The step down multiple regression analysis was done at last step for prediction of influence of independent variables on ICT utilization by layer farmers revealed that knowledge on ICT ($p \leq 0.01$), information seeking behavior ($p \leq 0.01$), and scientific orientation ($p \leq 0.05$) scientific orientation ($p \leq 0.01$) were significant in positive direction. Rationality in decision making showed non- significant relation in positive direction explained much of the variation (66.20 per cent) whose F value was significant at 5 per cent level of probability. This implied that these variables were crucial in explaining the variation in the ICT utilization by layer farmers. These entire variables focused on knowledge generation, processing and making decisions in a scientific and rational way for overall improvement. The chief function of ICT tools revolves around the same.

Broiler Farmers
The variables knowledge on poultry production, socio economic status, information seeking behavior (($p \leq 0.01$), knowledge on ICT, economic motivation, management orientation ($p \leq 0.05$) were positively

and significantly and achievement motivation non-significantly contributed to the ICT utilization which were left out in the last step of regression analysis for broiler farmers. These variables explained 75.00 per cent variation. The F value was significant at 1 per cent probability. So it could be inferred that all these 7 variables should be given importance in bringing about the variation in the ICT utilization among the broiler farmers. Socio-econimoc profile, technical information and psychological variables are very important.

Total Farmers

In case of total farmers, the variables such as knowledge on ICT, information seeking behavior, scientific orientation ($p \leq 0.01$) were significantly contributed in positive direction while knowledge on poultry production (non significantly) contributed to 58.60 per cent variation. The F value was significant ($p \leq 0.01$). So among the total farmers, knowledge on ICT, information seeking behavior, scientific orientation and knowledge on poultry production were to be given priority in influencing the ICT utilization.

. Prediction of independent variables contributed for maximum variation in farming performance of commercial poultry farmers.

Layer Farmers

The step down multiple regression analysis was done at last step for prediction of influence of independent variables on farming performance by layer farmers revealed that knowledge on ICT, rationality in decision making, achievement motivation, ($p \leq 0.05$), poultry farm size and management orientation ($p \leq 0.01$) were significant in positive direction; explained much of the variation (71.50 per cent) whose F value was significant at 1 per cent level of probability. This implied that these variables were crucial in explaining the variation in the farming performance by layer farmers.

Broiler Farmers

The variables knowledge on poultry production, socio economic status, information seeking behavior($p \leq 0.01$), knowledge on ICT and achievement motivation ($p \leq 0.05$), were positively and significantly contributed to the farming performance, which were left out in the last step of regression analysis for broiler farmers. These variables explained 73.10 per cent variation. The F value was significant at 1 per cent probability. So it could be inferred that all these 5 variables should be given importance in bringing about the variation in the farming performance among the broiler farmers.

Total Farmers

In case of total farmers, the variables such as poultry farm size, rationality in decision making, achievement motivation and management orientation ($p \leq 0.01$) were significantly contributed in positive direction while knowledge ICT (non significantly) contributed to 65.60 per cent variation. The F value was significant ($p \leq 0.01$). So among the total farmers, poultry farm size, rationality in decision making, achievement motivation, management orientation and knowledge ICT were to be given priority in influencing the ICT utilization.

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