

## **EXTENT OF VARIATION CAUSED BY INDEPENDENT VARIABLES OVERALL EXTENT OF CONTRIBUTION OF TRIBAL FARMWOMEN IN ANIMAL HUSBANDRY ACTIVITIES**

**Mahesh R. Patel<sup>1</sup>, Arun Patel<sup>2</sup> and Jaydip D. Desai<sup>3</sup>**

1 Assoc. Ext. Educationist, EEI, AAU, Anand - 388 110

2 Director of Extension Education EEI, AAU, Anand - 388 110

3 Senior Research Assistant, DoEE, AAU Anand - 388 110

Email : aaunewsmrp@aaui.in

### *ABSTRACT*

*Agricultural production plays a significant role in the Indian economy. In India, women and agriculture seem synonymous terms. One can not think of agriculture without women. There is hardly any activity in agriculture except ploughing, where women are not involved. The tribal farmwoman shares with her husband the arduous burden of farm work in addition to her major responsibility as home maker, by helping in all other agricultural and animal husbandry activities. Keeping this fact in mind, the present study was carried out to find out Extent of Variation Caused by Independent Variables overall extent of contribution of tribal farmwomen in Animal Husbandry Activities. The result of the study revealed that variable awareness regarding different development programmes, followed by material possession, social participation, size of land holding and education had exerted higher positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The other variables herd size, socio-economic status, attitude towards different development programmes, annual family income and bullocks possessed had exerted higher positive direct effect in sequential order.*

**Keywords:** contribution, tribal farmwomen, animal husbandry

### **INTRODUCTION**

Agriculture is the largest industry in India contributing to the source of livelihood for over 70 per cent of population. Agricultural production plays a significant role in the Indian economy. In India, women and agriculture seem synonymous terms. One can not think of agriculture without women. There is hardly any activity in agriculture except ploughing, where women are not involved. In some of the activities, she is relatively more efficient than man. Dahod is one of the Integrated Tribal Development Project (ITDP) areas of Gujarat State, where various administrative measures have been adopted through large number of tribal development and welfare programmes under Tribal Area Sub Plan (TASP). Since, independence huge fund have been diverted by the Central and State Government through different agencies with a view to uplift their living standard and bringing them into the main stream of nation. Even after lapses of more than 50 years of independence the progress of tribal farmwoman is not yet up to the level of expectation in the field of agriculture and animal husbandry as she is continued to be in a state of neglect. A victim of man made

system, she is hardly considered equal to man in wage and social status. Keeping in view the above said facts and information about the tribal farmwoman's situation and her multiple roles in agriculture and animal husbandry a study on "Extent of Variation Caused by Independent Variables overall extent of contribution of tribal farmwomen in Animal Husbandry Activities" was undertaken.

### **OBJECTIVE**

To know the extent of variation caused by independent variables overall extent of contribution of tribal farmwomen in animal husbandry activities

### **METHODOLOGY**

The present study was undertaken in Integrated Tribal Development Project areas of Dahod district of Gujarat. Out of seven talukas of the district, five talukas namely (1) Dahod (2) Zalod (3) Limkheda (4) Garbada and (5) Dhanpur were selected purposively for this study. Out of total villages of each selected taluka, two villages were randomly selected comprising total ten villages from five

selected talukas kof ITDP Dahod. From each village, 20 respondents were selected randomly, thus, total sample of 200 respondents were selected for the present study. The data was collected by interview schedule. Total 21 variables were selected for study as under :

**(A) Independent variables**

**I Personal-social**

- 1 Age
2. Education
- 3 Marital status
- 4 Type of family
- 5 Size of family
- 6 Social participation
- 7 Socio-economic status

**II Economical**

- 1 Occupation
- 2 Bullocks possessed
- 3 Material possession
- 4 Size of land holding
- 5 Herd size
- 6 Number of other working family member
- 7 Migration habit
- 8 Annual family income

**III Psychological**

- 1 Innovativeness
- 2 Risk preference
- 3 Scientific orientation
- 4 Attitude towards different development programmes
5. Awareness regarding different development programmes

**IV Communication**

- 1 Source of information

**(B) Dependent variables**

Contribution of tribal farmwomen in animal husbandry activities.

The method of path co-efficient analysis (Wright, 1921) was employed.

**RESULTS AND DISCUSSION**

Direct, total indirect and substantial indirect effects of personal-social, economical, psychological and communicational variables on overall extent of contribution of tribal farmwomen in animal husbandry activities

Total, 21 personal-social, economical, psychological and communicational characteristics of the tribal farmwomen were selected as independent variables for the study. In correlation analysis out of twenty one variables, a total of ten variables were found to be significant with the overall extent of contribution of tribal farmwomen in animal husbandry activities. While, in stepwise regression only six variables i.e. material possession, education, source of information, scientific orientation, awareness regarding different development programmes and social participation of tribal farmwomen were found significant and exerted their joint effects on overall extent of contribution of tribal farmwomen in animal husbandry activities. In path analysis, only those variables were included which had shown significant relation in correlation analysis. A total of ten variables were found significant, therefore, they were included in path analysis. The results of path analysis are presented in Table 1 and diagrammatically in Fig. 1.

**Table 1 : Path coefficient showing the direct total indirect, and substantial indirect effect of independent variables on over all extent of contribution of tribal farmwomen in animal husbandry activities**

n = 200

Sr. No.	Variables	Direct effect	Total indirect effect	Substantial indirect effect through			
				First order		Second order	
X2	Education	0.1349	0.1551	0.4168	X20	-0.4123	X17
X6	Social participation	0.1541	0.0725	0.2694	X20	0.1577	X16
X8	Bullocks possessed	0.0053	0.2204	0.1089	X20	0.0894	X9
X9	Material possession	0.1700	0.2424	0.1244	X20	0.0679	X10
X10	Size of land holding	0.1407	0.2301	0.0969	X20	0.0821	X9
X11	Herd size	0.0836	0.0626	0.1062	X17	-0.0791	X12
X14	Annual family income	0.0091	0.2273	0.1833	X20	-0.0906	X17
X19	Attitude towards different development programmes	0.0183	0.2231	0.4240	X20	-0.3511	X17
X20	Awareness regarding different development programmes	0.5836	-0.4159	-0.5472	X17	-0.3457	X18
X21	Socio-economic status	0.0781	0.2919	0.2208	X20	-0.1270	X17

### **Direct Effect**

The Table 1 makes it clear that the highest positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by awareness regarding different development programmes (0.5836), followed by material possession (0.1700), social participation (0.1541), size of land holding (0.1407) and education (0.1349). The other variables herd size (0.0836), socio-economic status (0.0781), attitude towards different development programmes (0.0183), annual family income (0.0091), and bullocks possessed (0.0053) in order of sequence had also exerted positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. From the above discussion, it can be concluded that variable awareness regarding different development programmes, followed by material possession, social participation, size of land holding and education had exerted higher positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The other variables herd size, socio-economic status, attitude towards different development programmes, annual family income and bullocks possessed had exerted higher positive direct effect in sequential order.

### **Total indirect effect**

It is revealed from the Table 1 that the highest positive total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by socio-economic status (0.2919) followed by material possession (0.2424), size of land holding (0.2301), annual family income (0.2273) and attitude towards different development programmes (0.2231). The other variables bullocks possessed (0.2204), education (0.1551), social participation (0.0725), and herd size (0.0626) in order of sequence had also exerted positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. Whereas, awareness regarding different development programmes (-0.4159) exerted negative total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The above foregoing discussion leads to conclude that among the positively and indirectly affecting variables, socio-economic status exerted the highest positive total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The other variables namely, material possession, size of land holding, annual family income and attitude towards different development programmes,

bullocks possessed, education, social participation, and herd size exhibited higher positive total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. Whereas, awareness regarding different development programmes exerted negative total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities.

### **Substantial indirect effect**

#### **(A) First order effect**

It is observed from Table 1 that the first order substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted through the variables namely, awareness regarding different development programmes, scientific orientation and source of information.

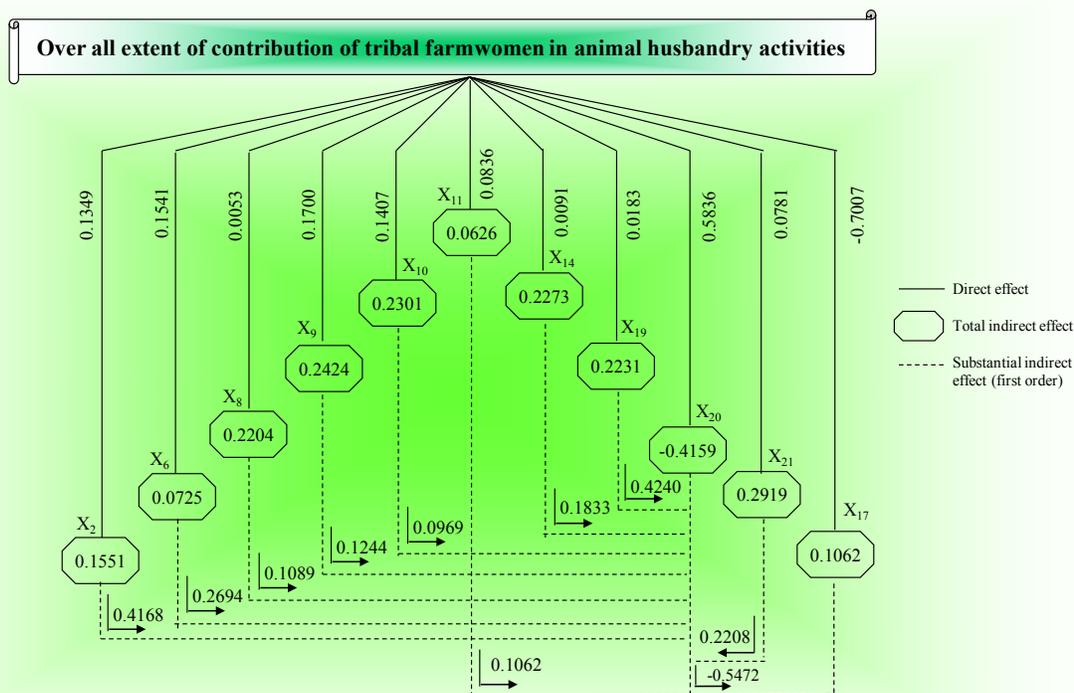
The first highest positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by education (0.4168) through awareness regarding different development programmes, followed by attitude towards different development programmes (0.4240), social participation (0.2694), socio-economic status (0.2208) and annual family income (0.1833), respectively. The other variables exerted considerable first order positive substantial indirect effect through awareness regarding different development programmes, were material possession (0.1244), bullocks possessed (0.1089), herd size (0.1062), through scientific orientation and size of land holding (0.0969) through awareness regarding different development programmes in descending order. It is interesting to note that most of the independent variables were exerted first order positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities through awareness regarding different development programmes. While awareness regarding different development programmes (-0.5472) had exerted negative first order substantial indirect effect through scientific orientation on overall extent of contribution of tribal farmwomen in animal husbandry activities.

#### **(B) Second order effect**

In case of second order substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted through scientific orientation, risk preference, material possession, size of

land holding and number of other working family member. The second highest positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by social participation (0.1577) through risk preference followed by bullocks possessed (0.0894) through material possession, size of land holding (0.0821) through material possession and material possession (0.0679) through size of land holding in their sequential order. Whereas, education (-0.4123) through scientific orientation, attitude towards different development

programmes (-0.3511) through scientific orientation, awareness regarding different development programmes (-0.3457) through risk preference, socio-economic status (-0.1270) through scientific orientation, annual family income (-0.0906) through scientific orientation and herd size (-0.0791) through number of other working family members exerted negative second order substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities.



**Fig. 1 : Direct, Total indirect and substantial indirect effect (first order) of different selected independent variables on over all extent of contribution of tribal farmwomen in animal husbandry activities**

The foregoing discussion leads to conclude that awareness of tribal farmwomen regarding different development programmes taken up in integrated tribal development project Dahod was the most important variable affecting directly and positively to the overall extent of contribution of tribal farmwomen in animal husbandry activities. It had also provided a way for the variables viz., education, attitude towards different development programmes, social participation, socio-economic status, annual family income, material possession, bullocks possessed and size of land holding exerting their indirect substantial effect on overall extent of contribution of tribal

farmwomen in animal husbandry activities. Therefore implementing agencies of different development programmes taken up in the areas of ITDP Dahod, non government organizations and other extension agencies should come forward to increase awareness of tribal farmwomen regarding different development programmes taken up in integrated tribal development project Dahod through various extension activities, so that tribal farmwomen can take the advantages of different development programmes taken up in the areas of ITDP Dahod and they give their more contribution in different animal husbandry development activities.

## CONCLUSION

It is concluded from the study that The variable awareness regarding different development programmes, followed by material possession, social participation, size of land holding and education had exerted higher positive direct effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The other variables herd size, socio-economic status, attitude towards different development programmes, annual family income and bullock possessed had exerted higher positive direct effect in sequential order.

Among the positively and indirectly affecting variables, socio-economic status had exerted the highest positive total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities. The other variables namely, material possession, size of land holding, annual family income and attitude towards different development programmes had exerted higher positive total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities in sequential order. The other variables bullock possessed, education, social participation, and herd size exhibited positive total indirect effect overall extent of contribution of tribal farmwomen in animal husbandry activities. Whereas awareness regarding different development programmes exerted negative total indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities.

The first order highest positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by education (0.4168) through awareness regarding different development programmes, followed by attitude towards different development programmes (0.4240), social participation (0.2694), socio-economic status (0.2208) and annual family income (0.1833), respectively. The other variables exerted considerable first order positive substantial indirect effect through awareness regarding different development programmes, were material possession (0.1244), bullock

possessed (0.1089), herd size (0.1062), through scientific orientation and size of land holding (0.0969) through awareness regarding different development programmes in descending order. It is interesting to note that most of the independent variables were exerted first order positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities through awareness regarding different development programmes.

The second order highest positive substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities was exerted by social participation (0.1577) through risk preference followed by bullocks possessed (0.0894) through material possession, size of land holding (0.0821) though material possession and material possession (0.0679) though size of land holding in their sequential order. Whereas, education (-0.4123) through scientific orientation, attitude towards different development programmes (-0.3511) through scientific orientation, awareness regarding different development programmes (-0.3457) through risk preference, socio-economic status (-0.1270) through scientific orientation, annual family income (-0.0906) through scientific orientation and herd size (-0.0791) though number of other working family members exerted negative second order substantial indirect effect on overall extent of contribution of tribal farmwomen in animal husbandry activities.

## REFERENCES

- Snedecor. G. W. and Cochran, W. G. (1967). 'Statistical Methods' (6th Ed.). Oxford & IBI Publishing Co. Pvt. Ltd., New Delhi
- Patel, J. G. (1998). Indigenous resource management by tribal farmwomen in Vadodara district of Gujarat state. Ph. D. thesis (Unpub), GAU, Anand
- Wrights, S. A. (1921). Correlation and causation. *J. of Agril. Res.*, 20 : 557-585