Development of Scale to Measure Socio Economic Status of Farmers under Hemavathi Irrigation Project

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ABSTRACT

A scale to measure socio-economic status of farmers under Hemavathi irrigation project in Mandya and Hassan Districts was developed in this research study. Based on the review of literature and discussion with the experts, 36 items were enlisted. The relevancy rating was obtained from 50 judges in the concerned area. All those items with the relevancy percentage of 80 and above were selected for the inclusion in the socio-economic status scale. Twenty three items passed the above criteria. The scale developed was found reliable (0.9902) and valid (0.8151).

WATER is an essential natural resource for the survival of life and a key input for plant growth. It is considered as one of the five elements of basic natural resources existing in the universe for the survival and reproduction of life in general, including plants. Irrigation is defined as artificial application of water for the purpose of supplying moisture essential to plant growth (Reddy, 2012). India has made great strides in irrigation projects since independence. Now it has one of the largest irrigation networks in the world. The major purpose of irrigation in agriculture is to increase agricultural production and consequently improve the economic and social situation of the people of the project area. Full benefit of crop production technologies can be derived only when adequate supply of water is assured. On the other hand, optimum benefit from irrigation is obtained only when other crop production inputs along with the related technologies are applied. The major purpose of the irrigation in agriculture is to increase agricultural production and consequently improve the economic and social well-being of the farmers. Socio-economic status of an individual / community is also influenced by several variables like the resources, their age, family size, health, literacy, occupation, income, wealth, possession of materials, life style etc.

Socio- economic status is operationally defined as the status of the farmer under Hemavathi irrigation project with reference to level of education, income, food consumption pattern and crop productivity.

Irrigation is the major element in any farming activity which helps to achieve better yield, employment generation etc, The study may throw light on the socio-economic transformation that might have occurred due to Hemavathi irrigation project in Mandya and Hassan districts.

Socio- economic status is a composite of four dimensions *viz.,* social, economic, cultural and agricultural productivity. Hence, the researcher thrust was to identify items under the four dimensions that truly reflected farmer's socio-economic status in the irrigation project. An attempt has been made to develop a scale to measure the socio-economic status of farmers in Mandya and Hassan districts.

The scale was developed to measure socio economic status of farmers of irrigated situation and to compare the socio economic status of the farmers of rainfed situation, thus to study the socio-economic impact of the Hemavathi irrigation project in Mandya and Hassan districts of Karnataka.

Based on the review of literature as well as discussion with the experts in the field, 36 items were enlisted in accordance with the situation existed in the project area. The final list of components was subjected to relevancy rating of 50 judges in the concerned area. The judges belonged to the cadre of Assistant Professors and above in the area of Agricultural Extension and Agricultural Economics in the University of Agricultural Sciences, KVKs and other ICAR

institutes. The experts were requested to indicate whether each of the components were relevant and suitable for inclusion in the scale to measure the socio economic status of farmers on a three point relevancy continuum, *viz.,* Most Relevant, Relevant and Not Relevant with 3, 2 and 1 scores, respectively. They were also requested to add new indicators, which tend to measure the socio-economic status, if any, they consider relevant.

The responses obtained from the judges were scored and the relevancy percentage of components (RP) was worked out using the following formula:

$$R.P \quad \frac{(MR \times 3) + (R \times 2) + (NR \times 1)}{\text{No. of judges responded} \times \text{Maximum score}} \times 100$$

R.P.=Relevancy Percentage, MR= Most Relevant, R= Relevant, NR= Not Relevant

Accordingly components having relevancy percentage of 80 and above were considered for further processing and suitably modified as per the comments of experts wherever applicable. Twenty three components selected are listed in Table I.

Reliability and validity of the scale: Reliability refers to the precision or accuracy of the measurement or scale. A well-made scientific instrument should yield accurate results both at present as well as over time (Ray and Mondal, 2011). Pre-testing of the scale was done using 32 respondents in non sample area. Brown prophecy formula was employed to study the reliability of the scale. The reliability co-efficient of the socio-economic status scale was 0.9902, indicating higher reliability of the scale. According to Kerlinger (1973) content validity is the representativeness or the sampling adequacy of the contents, the substance, the matter and the topics of a measuring instrument. The data were subjected to statistical validity, which was 0.8151, for socio-economic status scale. Hence, the validity co-efficient was also found very high. Hence, the scale developed is both reliable and valid.

TABLE I

Item wise relevancy percentage of different dimensions of socio-economic status of farmers

(n=50)

Sl. No.	Indicators	Relevancy Percentage (RP)
I	**SOCIAL DIMENSION**	
1	Education	94.66
2	Social participation	90.00
3	Mass media participation	87.33
4	Extension participation	91.33
5	Cosmopoliteness	86.00
6	Social recognition	86.66
7	Livelihood status	88.89
II	**ECONOMIC DIMENSION**	
1	Land holding	94.66
2	Annual income	99.33
3	Material possession	91.33
4	Type of house	84.00
5	Debt to asset ratio	85.33
6	Savings	87.33
7	Employment generation	95.56
III	**CULTURAL DIMENSION**	
1	Food consumption pattern	85.33
2	Hygiene	80.00
IV	**AGRICULTURAL PRODUCTIVITY DIMENSION**	
1	Crop productivity	97.33
2	Cropping intensity	91.33
3	Cropping pattern	92.66
4	Mixed cropping	91.33
5	Multistoried cropping	86.66
6	Crop rotation	88.00
7	Subsidiary occupation	87.33

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