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Good Practices in Conducting Survey Research on Livelihoods of Farmers

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ABSTRACT Livestock holdings decide the economic status of farmers along with landholdings. Study to assess livestock's contribution to the livelihood of resource poor farmers was undertaken in Southern India. This region posed challenge to conduct survey due to socio-cultural and ecological diversity and the complexity of farming system. Multistage stratified random sampling was followed to collect data. Understanding region's crop calendar and identifying lean period linking with local institutions facilitate good response. Before noon is the best period to collect data. Resource poor farmers share the information in lengthy livelihood surveys more willingly than resource rich farmers. Dealing with latter hence demand special skills. Selection of local enumerators with good acquaintance of prevailing cultural practice and language is crucial. Bringing all enumerators to the same platform through 2 days orientation about the study would help for smooth conduct of survey from the diverse and complex group.

INTRODUCTION

Indian farming system is characterised as diverse, complex and risk prone. The diversity and complexity of the system prevails inter and intra village, between preceding and succeeding years and inter and intra households too. The farm resource matrix of the household influences the farming decisions. Besides, the social fabric and diverse culture do influence the decisions on farming which is mixed enterprise of crop and livestock. Livestock developments in India have been significantly influenced by religious and cultural factors, making the nature of India's livestock sector to some extent unique (Tisdell and Gali 1999).

As elsewhere, Indian agriculture is also experiencing the recent change in the climate factors. The consequences of climate change will change conditions and undermine livelihoods in many areas. Many farmers prefer to keep livestock to bring in sustainability to their family income as livestock are less prone to weather related parameters when compared to crops (Biradar and Sridhar 2009). Few decades before India experienced reduction in the number of livestock due to decreased availability of fodder. Susceptibility of crops, majority invaded by hybrids, to various pests and diseases and comparative resilience of livestock to weather parameters, regularity and profitability of its income also contributed for farmers' inclination to keep more livestock. Now India stands first in livestock numbers and production in the world. The distribution of livestock holdings in India is much less skewed as compared with land holdings. Around 2/3 of livestock, particularly cattle, are maintained by small and marginal farmers and landless labour (Pasha 2005). As distribution of livestock wealth is more egalitarian, compared to land from the equity and livelihood perspective it is considered an important component in poverty alleviation programmes. Tembo et al. (2015) in their study conducted at Zambia identified livestock as the most important source of income and the second most important source of livelihood in general.

Farm households in India are categorised mainly based on landholdings, but possession

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of livestock do contribute for their economic status. The livestock's contribution to the livelihood of farm households though is in various forms- source of protein, farm yard manure, fuel etc but little information exists about its actual contribution to different farm household categories. Even the landless farmers do keep livestock as an important livelihood source, the sector which is remotely studied. The key constraints for such empirical studies in this field are vulnerability to the seasonal changes, the dynamic herd size, variations across different socio economic groups, high variability of natural resource conditions especially the grazing lands etc.

A study to analyse the livelihood of small and marginal livestock farmers was contemplated and planned in southern region of India. The purpose of the study was to assess the contribution of livestock to the livelihood of resource poor farmers of the region. The socio cultural and ecological diversity, the complexity of farming and dynamics of south India posed the challenges for collecting data through survey method. Besides, capturing the dynamic interplay of the different livelihood elements is a special challenge in conducting socio-economic household surveys (Witt et al. 2010). There has been a growing emphasis on the data collection aspect of the research design (Crawford 2002; Denzin and Lincoln 2005; Waller 2013). This paper shares the experiences accrued while collecting data from this vast and diverse south India and the ways to deal with the some of the difficulties emerged during data collection process.

METHODOLOGY

An extensive survey was taken up in South India by following multistage stratified random sampling as the population was too large and scattered. At first stage, the districts that were grouped as backward districts under backward district initiative by Government of India were considered for the study**.** Out of 100 districts classified as backward in the country, 17 districts belonged to South India. These districts were then classified as per the agro-ecological regions classified by National Bureau of Soil Survey and Landuse Planning (NBSS&LUP). It classified the regions in to six as 1. Arid Ecosystem 2. Semi-arid ecosystem 3. Sub-humid ecosystem 4. Humid per-Humid ecosystem 5. Coastal ecosystem and 6. Islands ecosystem, essentially based on physiography, soils, bio-climatic types and growing period which influences the supply of water for plant growth. For this classification NBSS&LUP made use of 50 years data of over 350 meteorological stations and up-to-date soils database available in the country. Then the identified backward districts of South India were grouped under each of these agro-ecological regions and these districts fell under three eco regions- Arid ecosystem, Semi- arid ecosystem and Humid-per humid coastal ecosystem. In arid ecosystem three districts, Semi- arid ecosystem 5 districts, Humid per humid coastal ecosystem 5 districts belonged; the region and state wise details are given in Table 1.

Table 1: Backward districts of south India as per eco regions

Region	*State*	*Districts*
Arid Ecosystem	Andhra Pradesh	Anantpur
	Karnataka	Bijapur, Bellary
Semi Arid Ecosystem	Andhra Pradesh	Cuddupaha, Mahboobnagar
	Karnataka	Bidar, Davanagere Chitradurga
Humid-Per-Humid- Coastal Ecosystem'	Andhra Pradesh	Guntur
	Karnataka	Mangalore
	Tamil Nadu	Cuddalore
	Kerala	Wayanad
	Puducherry (Union Territory)	Karaikal

At second stage the study considered the three agro ecological regions of south India out of 5 regions, as 6th region, the island ecosystem, does not form the part of South India. In all the study considered 13 districts belonging to 3 agro ecological regions. Other four districts classified as backward district were not considered as they formed the contiguous districts with already selected districts with existence of similar cropping system.

Three blocks representing distinct cropping systems to reflect the different farming systems prevalent in the area were selected from each district. Three villages from each block by Y-shaped or triangular transects (Affleck et al. 2005) as population is discretely distributed, were selected and 6 households from each village were sampled randomly with minimum five households belonging to landless to small holder categories and one to big land holders category for

comparison. A household for the study was as defined by Witt et al. (2010), as an economically independent unit consisting of the household head, one or more spouse, children and other directly dependent members, living under common roof.

Households must own livestock but of landless or landholding categories were interviewed to capture different socio-economic configurations present in the study area. Data was collected through personal interview technique using pretested and standardised interview schedule. In all study covered 13 districts, 39 blocks, 117 villages and 585 households of South India.

The interview schedule was developed to assess the livelihood of these livestock farmers by incorporating 5 capital assets- human capital (HC), natural capital (NC), physical capital (PC), socio political capital (SC) and financial capital (FC). These assets are central to livelihoods analysis because they affect the ability of individuals or households to pursue particular livelihood strategies (or activities) (Scoones 1998). Sustainable livelihoods framework of Department for International Development (DFID) is developed based on these capital assets and the present study used this framework for the analysis. It presents the main factors that affect the sources of people's livelihoods and also make typical relationship between them. The conceptual framework of DFID provides attention to measured changes in the different factors, which contribute to different livelihoods especially human, social, financial, physical and natural capital assets (Pasteur 2001). Various key indicators were used to assess the different capital assets. The interview-schedule was pre-tested and standardised before administering to the respondents.

RESULTS

Researchers should approach data collection in a rigorous and ethical manner (Kelley et al. 2003). The challenges anticipated and faced during initial phase of the survey and subsequently handled successfully by following simple practices are enumerated in this paper. These good practices if followed would help the researchers conducting survey in similar conditions to plan and implement more candidly for obtaining best quality data.

Designing Question Route in Data Tool

As mentioned earlier many capitals need to be studied in livelihood analysis, making the questionnaire quite lengthy. In such cases it is particularly important to place the questions related to financial capital in the middle of the questionnaire for the reasons that initially it is still the period of rapport building and by the time we are in the midst of the questionnaire we would have got fair idea about their resources. Besides, in lengthy questionnaires, most important questions be placed in the beginning itself and less important ones at the end. Also place related questions in serial order. For example questions related to herd size, cropping pattern, feeding systems of livestock and livestock production would be placed in order as they are inter connected.

Keeping Data Tool Tested and Ready in Accordance with Linguistic Differences

As the states are separated by linguistic boundaries, it was essential to translate the interview-schedule in those languages spoken by each state. The interview-schedule prepared initially in English was translated in Tamil of Tamil Nadu and Puducherry, Telagu of Andhra Pradesh, Malayalam of Kerala and Kannada of Karnataka with the help of experts from respective farm science centres or State Agriculture Universities. The translated interview schedule was pre-tested before beginning data collection process to identify ambiguities if any in translated version.

Seasonality and Time of Data Collection

Planning the research design is a key step in any social studies. Surveys vary in scale, but also in location, objectives and methods. The study area had different cropping seasons. The study intended to collect large amount of data from the respondents to spare minimum 80-90 minutes. In order to facilitate this process, the information on season specific crop operations were collected for each agro ecological zone by discussing with the experts from respective Farm Science Centres (*Krishi Vigyan Kendras*) and/or State Agricultural Universities. Based on this, the time for data collection for each district was finalised in such a way that the farmers are relatively free (September-October and March-April) from their farm operations.

Selecting and Preparing Enumerators for Data Collection

The personal interview technique was the method identified for data collection and to collect the data in local vernacular language for each state 6 enumerators were selected, one for each household in a village, with the criteria of their familiarity with the rural areas and the agriculture terminologies being used in the specific area. These enumerators were given 2 days orientation using facilities of Farm Science Centres or State Agricultural Universities, one day briefing them about the study and making them familiarised with the interview-schedule and second day administering this study tool by each enumerator to the farmers in non sample villages. This helped them not only to understand the importance of the study but also to work out the ease with which they could administer the tool. Evenings of these two days the enumerator shared the experiences and clarified the doubts with the researcher. This step was felt very crucial as the quality of the data collected for the study greatly influenced by the enumerators' capabilities to administer the study tool and to maintain highest data integrity.

Facilitating and Supervising Data Collection Process at Village Level

Careful planning of logistics was ensured due to the remoteness of villages and perfect planning for efficient use of time was done. All the six enumerators were accompanied to the village by the first author to facilitate and supervise the data collection process. This enabled that each enumerator interprets every question in the similar way and clarifies any further doubts (as local language varies between villages) with the researcher and also ensured that there are no gaps left unaddressed in this important stage of the study. Getting quality data was the major objective of this process.

DISCUSSION

It is important that researchers recognize that the development of the research tool is equal in importance and deserves equal attention- to data collection (Kelley et al. 2003). While most reports of questionnaire development focus on content and validation, it needs to be remembered that the questionnaire or survey is only one part of the study design. If information and methods of administration are not acceptable then this will impact on the success of data collection and in the case of longitudinal research, retention (Taylor et al. 2015). While collecting data on financial aspects it is better to follow split-wise questions like income from crop, animal husbandry, labour (in terms of days worked, no of family members worked as labour and wage received is always the better option), and other sources. This helps to get more near to real figure. Kelly et al. (2003) reported that the design, wording, form and order of questions can affect the type of responses obtained and careful design is needed to minimise bias in the results. Deciding question route in designing questionnaire plays an important role. In livestock studies, information on fodder crops needs to be collected. Many of the grasses (native and improved ones) have obtained local names which vary from place to place. As many farmers does not know the name of the fodder crops, but call it by some local names it is helpful to design a questionnaire with the pictures of popularly grown forage crops with the earheads/panicle for easy identification. This helps to demystify the confusion and get relevant data about fodder crops.

Farm mechanisation is sparsely followed in the study area and in most cases it is the family labour do the farming. Only for some operations like weeding and harvesting hired labours are engaged with them. So it is very important to understand the crop calendar of each district and identify the lean period based on the single, double or continuous crop being taken up in these district. Generally lean period of one month prevails between two seasons which can be exploited for data collection work. The good quality data is certainly influenced by the relative time availability with the farmer. Farm Science Centres located in every district were consulted to understand the crop calendar prevailing there and identify the best period for data collection. Data collection during lean period was successful in most cases. However in coastal Karnataka the situation was different. Here male counterpart works elsewhere (mainly in hotel industry in Mumbai) and during lean period the family joins him. Besides, the villages are very small many times with 6 to 10 households per village. Hence the data was collected during the crop

season but with the prior intimation given to them. Time of data collection also is very important. Before noon is the best period for data collection as many of the farmers are relatively free and are fresh to share the information. Afternoon it is hard to find the farmers as after Lunch they tend to visit the nearby cities either to attend agriculture related works or for household matters. Evening is the worst period of data collection as many of them were found in inebriated state. However it was observed that afternoon majority of farmwomen were accessible being free from household chores. Field research tends to be conducted during the dry season. In part this is because accessibility to many rural areas is easier during this season (Chambers 1980). Thus, research often has a seasonal bias, with conditions appearing more prosperous than they are over the balance of the year. However, for data collection on livestock production system and livelihood, seasonal biasness should not play a major role as it is the availability of farmer with the willingness to share the information without affecting his important crop operation is most important. Hence the placing of survey periods need to be adapted to these conditions.

Livelihood surveys are lengthy encompassing different livelihood assets and indicators. It was observed during the data collection process that large farmers due to their preoccupied work decline participating in survey which is not so in case of small and marginal farmers. The latter, share the information with much patience and willingness. So requesting large farmers for their participation in survey requires special skill to make them understand the importance of the study and their role in it. Besides, one can observe some farmers in the village volunteering for sharing information. Such farmers could be contacted for getting other related information which is more specific to that village. For instance, history of grazing area and its encroachment in the village. This helps to get some of the relevant issues required for the study. Also you may get some new ideas for your further research work.

Use of enumerators is important especially when different languages are spoken and different culture prevails. So selecting enumerators from the local area and having good acquaintance with the prevailing cultural practice and language is important. Orientation to the enumerators is the important step for getting quality data. During orientation it is important to make them understand the importance of the study and explain them each question and what they mean. Because, if the data collected for a research project is flawed, incorrect, or invalid in any way, it can have a significant implications on the conclusions drawn (Schraepler and Wagner 2003). While orienting the enumerators about data collection process, draw their attention to the specificity of mentioning the quantities either as tons, quintals, truckloads, tractor loads, gunny bags, straw bundles, hay baskets etc. They need to specify what farmer has expressed. Otherwise whole exercise will be futile. In the same way the terminology for measuring part of an acre is also specific to some states while in Karnataka an acre comprises 40 *guntas* but in Andhra Pradesh it is 100 cents. So this differences should be brought to the notice of the enumerators and make them to appreciate these minute details for getting better quality data. Also before going for pre-test in villages, ask them to interview each other to become familiar with the questionnaire. During piloting let the enumerator interview only one or two farmers. Sit back and review each enumerator's filled questionnaire. If this is done, 90 percent of the work of next few days is fulfilled. Selecting local enumerators is also advantageous like they are sensitive to local sentiments for instance cows are worshipped and have high religious value in most part of South India. One need to be tactful while asking related questions.

CONCLUSION

Gathering information from diverse group demands very elaborate planning and preparations to generate right kind of data and to reduce the possible errors creeping in. The planning however needs to be done in collaboration with the local institutions, for right translation of interview-schedule, getting able enumerators with the string knowledge of local farm terminologies and cultural and social aspects.

RECOMMENDATIONS

Systematic sampling, designing of questionnaire with carefully thought question route, capacity building of enumerators, linkages with local related institutions would help to get best

quality data for conducting empirical surveys of livelihood of livestock farmers.

REFERENCES

Affleck DLR, Timothy G, Gregoire, Valentine HT 2005. Design unbiased estimation in line intersect sampling using segmented transects. *Environmental and Ecological Statistics*, 12: 139-154.

Biradar Nagaratna, Sridhar K 2009. Consequences of 2003 drought in Karnataka with particular references to livestock and fodder. *Journal of Human Ecology,* 26(2): 123-130.

Chambers R, 1980. Rural Poverty Unperceived: Problems and Remedies. Institute of Development Studies, University of Sussex, Brighton, *Mimeographed*.

Crawford S 2002. Evaluation of web survey data collection systems. *Field Methods*, 14: 307-321.

Denzin NK, Lincoln YS 2005. *The Sage Handbook of Qualitative Research*. Thousand oaks, CA: Sage.

Dixon J, Gulliver A, Gibbon D 2001. *Farming Systems and Poverty: Improving Farmers' Livelihoods in a Changing World.* Rome: Food and Agriculture Organization of the United Nations; Washington, DC: World Bank.

Kelley K, Clark B, Brown V, Sitzia J 2003. Good practice in the conduct and reporting of survey research. *International Journal of Quality in Healthcare*, 15(3): 261-266.

Pasha SA 2005. Livestock-Environment Interactions: Issues, Problems and Prospects. From <www. isec. ac.in/project6-2005.pdf> (Retrieved on 5 December 2013).

Pasteur K 2001. *Tools for Sustainable Livelihoods: Monitoring and Evaluation.* Brighton: Institute of Development Studies.

Schraepler J, Wagner GG 2003. Identification, Characteristics and Impact of Faked Interviews in Surveys: An Analysis by Means of Genuine Fakes in the Raw Data of SOEP. From<http://ftp.iza.org/dp969.pdf> (Retrieved on 2 February 2014).

Scoones J 1998. Sustainable Rural Livelihoods: A Framework for Analysis. *IDS Working Paper* 72, IDS, University of Sussex, Sussex, pp. 3-22

Taylor RM, Fern LA, Solanki A, Hooker L, Caluccio A, Pye J, Jeans D, Smith T, Gibson F, Barber J, Raine R, Stark D, Feltbower R, Pearce S, Whelan JS 2015. Development and validation of the BRIGHTLIGHT Survey, a patient-reported experience measure for young people with cancer. *Health Qual Life Outcomes,* 13: 107.

Tembo G, Tembo A, Goma F, Kapekele E, Sambo J 2015. Livelihood activities and the role of livestock in smallholder farming communities of southern Zambia. *Journal of Social Sciences,* 2(4): 299-307.

Tisdel C, Gali J 1999. Trends and Developments in India's Livestock Industry. Working Papers on Economics, Ecology and the Environment. *Working Paper No*. 31. The University of Queensland, Brisbane.

Waller GL 2013. Interviewing the surveyors: Factors which contribute to questionnaire falsification (curbstoning) among Jamaican field surveyors. *International Journal of Social Research Methodology*, 16(2): 155-164.

Witt R, Pemsl DE, Waibel H 2010. Collecting data for poverty and vulnerability assessment in remote areas in Sub-Saharan Africa. *Survey Methodology,* 36(2): 217-222.

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