SAMPLE SURVEYS
OF

शुभ कामनाओं सहित

महानिदेशक

केन्द्रीय सांख्यिकीय संगठन

सांख्यिकी विभाग, योजना मंत्रालय

सरदार पटेल भवन, संसद मार्ग,

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With the compliments of

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CENTRAL STATISTICAL ORGANISATION
DEPARTMENT OF STATISTICS
MINISTRY OF PLANNING
GOVERNMENT OF INDIA
NEW DELHI

SAMPLE SURVEYS
OF
CURRENT INTEREST
IN INDIA

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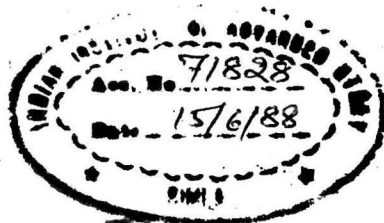
PREFACE

This report is the thirty-seventh in the series being brought out by the Central Statistical Organisation since 1949-50. Hindi version (mimeographed) of this publication is also being brought out since 1979 issue.

2. The information given in this publication pertains to 49 important sample surveys reported to have been undertaken during the calender year 1985 by various agencies like Central and State Governments, Research Institutions and Universities. It provides information on the objectives, coverage, survey design, organisational aspects, data collected and other related details.

3. The surveys have been arranged by broad subject groups such as agriculture, animal husbandry, education, health, family welfare and vital statistics, industry, labour, employment and wages, socio-economic, trade etc. to facilitate easy reference. An agency-wise index of surveys has also been given as an appendix. Besides, there are other regular surveys like crop estimation surveys, which have not been reported in this volume as there has been no material change in their coverage, survey design or methodology.

4. This Organisation wishes to express to all the agencies its appreciation for their cooperation in supplying the information needed for the preparation of this report. Suggestions regarding possible amplifications and other improvements in the presentation and coverage of the publication are most welcome.

5. The material for this publication has been prepared in the Sample Survey Division of the Organisation under the overall guidance of Shri M.G.Sardana, Project Coordinator and supervisior of Shri V.Vikraman, Joint Director, by S/Shri S.V.Pimparkar, Officer-on-Special Duty, K. Sundararajan, Deputy Director and S.D.L. Srivastava, Senior Investigator. Smt, Sandhya vohra has assisted in Secretarial work.

<div align="right">DIRECTOR GENERAL</div>

CENTRAL STATISTICAL ORGANISATION
DEPARTMENT OF STATISTICS,
MINISTRY OF PLANNING,
GOVERNMENT OF INDIA,
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Sample Surveys conducted during 1985

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, NEW DELHI

1. Comprehensive scheme for studying the cost of cultivation|production of principal crops in India.

1. This is a continuing annual survey conducted by the Directorate of Economics and Statistics, Minis-try of Agriculture and Rural Development, New Delhi. This survey was reported in the 36th annual report of the publication as survey No. 2. No major changes were made during the year under reference.

INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE, NEW DELHI

2. Pilot sample surve to evolve a sampling methodolog for estimation of inland fishery resources and catch in a region of Orissa.

Introduction

2.1 This was a pilot survey sponsored by the Indian Council of Agricultural Research (ICAR) and conducted by the Indian Agricultural Statistics Research Institute (IASRI), New Delhi and Directorate of Fisheries, Orissa. The main objectives of the survey were (i) to evolve a suitable sampling methodology for estimating the inland fishery resources and catch of fish and (ii) to study the prevailing practices of pisciculture. Three districts, namely, Bolangir, Cuttack and Sambalpur in the State of Orissa were covered under the survey.

Sampling Design

2.2 For estimating the extent of area under various inland fishery resources the sampling design was stratified two stage. The aforementioned theee districts were treated as strata. The blocks of gram panchayat and ponds in gram panchayat constituted the first stage and second stage units respectively. Two blocks from Bolangir, three from Sambalpur and ten from Cuttack district were selected by probability proportional to size (number of water unit) with replacement. Within each block two strata were formed according to the number of water units in gram panchayat. Then from each stratum, a sample of two gram panchayats was selected by simple random sampling without replacement.

For estimating the total catch of fish the sampling design adopted was stratified three stage sampling. A further selection of water units was done from each of the selected panchayats.

Field Work

2.3 The field work which started in May, 1985 would be completed by December, 1986 by spending about 5400 mandays. The data were being collected by the method of enquiry and physical observation from the fish cultivators and by consulting revenue records. In all, fifteen field enumerators and three field supervisors all appointed on ad hoc basis, were entrusted with the field work. The training for filling up the schedules was imparted to them by the IASRI scientists prior to their deployment in the field. The supervision of field work was carried out by the Director of Fisheries, Orissa and IASRI Scientists. Five different types of schedules were canvassed during the survey for eliciting the required information.

3. Statistical investigations on econome of pig production.

Introduction

3.1 This ad hoc survey was conducted by the Indian Agricultural Statistics Research Institute (IASRI), New Delhi in Ranchi Sadar and Simdega sub-divisions of Ranchi District with the following twin objectives : (i) to evolve a suitable methodology for evaluating the commercial aspects of rearing pigs to an assigned stage of growth under field condtions and (ii) to estimate component-wise costs of raising and rearing pigs. The broad subject heads covered in the survey were cost of production, feed intake and labour utilisation. No pilot survey preceded this survey.

Sampling design

3.2 A two-stage random sampling design with stratification at second stage was adopted. In the two subdivisions, out of 744 villages having pigs, 120 were selected by probability proportional to pig population for preliminary enumeration. For detailed enquiry clut of 120 villages, 34 were selected by simple random sampling method. Households having pigs in each of the 34 village were stratified into three groups viz; (i) having 1—3 pigs, (ii) having 4—6 pigs and (iii) having 7 or more pigs. For the second stage selection, five households from each of the selected villages spread over three strata were taken randomly for the survey. The sampling fraction was about 7/24 for the first stage units.

Field Work

3.3 The field work was carried out during 1st February, 1984 to 30th April, 1985 by spending 3000 mandays. The data collected through field enumeration were based on oral information, visual observations and direct measurement. Five enumerators who were regular, full time and experienced were deployed on the field work under supervision of two supervisors. A training of 10 days duration was also imparted to

the field staff before their deployment in the field. Four different types of questionnaires—one for preliminary enumeration and 3 for detailed enquiry were canvassed during the course of the survey. As a workload norm, each enumerator was allotted 35 households to collect information from them in a fortnight. Average time taken in filling a schedule of any type was about one hour per household.

Data Processing

3.4 About 7950 canvassed schedules were involved in data processing. Four persons including two each on scrutiny and coding were deployed on data processing. About 180 mandays were spent on pre-tabulation processing in the central office. Tabulation was done manually by spending 120 mandays. About 25 per cent verification was done of tabulated data. Further processing of data was to be done on computer.

Report

3.5 Survey report entitled 'Statistical Investigations of Economics of Pig Production—Ranchi District (Bihar)' was to be brought out by August, 1986.

An expenditure to the tune of Rs. 1.5 lakh was reported to have been incurred on field operations.

DIRECTORATE OF AGRICULTURE, ASSAM, GUWAHATI.

4. (1) Productivity survey of wheat for irrigated and unirrigated crops.

(ii) Yield estimation survey of jute for early flowering and normal crops.

Introduction

4.1 The Directorate of Agriculture, Assam conducted these two ad' hoc surveys with the respective objectives of (i) estimating the productivity of wheat grown in irrigated and unirrigated areas of the state and (ii) estimating whether the productivity of jute is affected adversely by the early flowering than the normal crops. The first survey was conducted in Dhubri, Kokrajhar, Barpeta, Kamrup Nowgong, Jorhat Karbi-Analong and N. C. Hills districts whereas the second survey was conducted in Nowgong, Marigaon and Mamgaldoi sub-divisions of Assam. The estimates were required at sub-division level. Data were collected on fields growing wheat/jute, date of sowing, use of fertilizer, level of yield, variety of seeds used etc.

Sampling Design

4.2 A staratified multistage random sampling design was used for both the surveys. The starata consisted of 15 and 3 sub-divisions respectively for the two surveys. Villages in the irrigated command area having wheat crop and villages affected by early flowering of jute crop respectively formed the frame for the two surveys. Villages, fields growing wheat|jute crop and a plot of size 5×5 sq. meters were the units used at the three stages of sampling. In both the cases, equal number of samples were allocated to different strata and the various stages of sampling units were selected on simple random basis. In case of final stage of sampling units i.e. the plots, equal number of plots were selected for irrigated and unirrigated wheat crops, and for normal jute crops and jute crops having early flowering for a comparative study of productivity of the two crops. With a view to studying the productivity under same cultivation conditions experiments in case of wheat crops were selected from same villages for both irrigated and unirrigated crops. Similarly in case of jute crops both the experiments, i.e. the normal jute crop and the crop affected by early flowering were selected for same variety of jute crop. The final stage of sampling units thus consisted of 256 experiments each for irrigated and unirrigated wheat crop and 42 experiments for normal jute crop and for jute crop affected by early flowering.

Field Work

4.3 The field work for wheat survey started in February, 1985 and was completed in April, 1985 by spending about 1280 mandays. The jute survey was started in June, 1985 and completed in September, 1985 by spending about 154 mandays in the field. A total of 36 Primary Investigators conducted both the surveys under the supervision of 17 Inspectors of Statistics and 7 Senior Inspector of Statistics. Supervision was done to the extent of 25 per cent of experiments surveyed. The Sectional Officers controlled the field jobs within their respective districts. Two types of schedules were canvassed for collection of various details of wheat crop and a single type of schedule was used for Jute crop. As a workload norm, every Primary Investigator was required to conduct 16 experiments in plain districts and 8 experiments in hill districts in respect of wheat crops whereas he was required to conduct survey in respect of 12 experiments in the case of jute crops. On an average it took about 3 hours to fill in a schedule for recording data on productivity/yield. Non-response was of the order of 22 per cent in the case of irrigated wheat crops.

Data Processing and Report

4.4 Data were processed by 2 persons by spending about 260 mandays in the field and 120 mandays at the headquarters. Data were tabulated manually with the help of desk calcuators in a period of 120 mandays. With a view to ensuring accuracy in tabulation work, atleast 10 per cent of the tabulation was checked by the Sectional Officer. First set of tables were ready by September, 1985 and December. 1985 respectively for the two surveys. The reports in respect of both the surveys were expected to be released by March and May, 1986 respectively. The estimated cost of the both the surveys was of the order of Rs. 16 lakhs.

AGRO-ECONOMIC RESEARCH CENTRE VISVA BHARTI, SANTINIKETAN

5. Problems of under utilization of irriation potential created in Bihar.

Introduction

5.1 The Agro-Economic Research Centre, Visva Bharati, Santiniketan conducted this adhoc survey at the instance of the Union Ministry of Agriculture and Rural Development, New Delhi. The main objectives of the survey were to enquire into the extent of under utilization of irrigation potential at the farm level and to find out reasons for the same. The broad subject heads covered in the survey were area, production of crops by seasons, extent of irrigation utilisation by seasons etc. Agricultural year 1984-85 was treated as the reference period for the survey. Two districts namely, Bhojpur and Rohtas in the state of Bihar were covered under the survey.

Sampling Design

5.2 From each of the two districts marked for the survey, two blocks and from each block, two villages, one located at the head-end and the other at the tail-end of the distributory—were selected purposively. In each selected village, separate lists of owner/tenant operators (farmers) were prepared. Farmers were grouped into four classes viz. having land (i) upto 1 hectare, (ii) 1-2 hectares, (iii) 2—4 hectares and (iv) above 4 hectares. Then a sample of 20 farmers utilising (Canal) irrigation and who had received benefit in atleast 50 per cent of their total land holdings includ-in both owner and tenant operators was taken rand-omly. Number of owner and tenant operators in the sample of 20 farmers was determined on the basis of their weightage in the total population.

Field Work

5.3 The field work was carried out during November, 1984—February, 1985.The required data were collected by the method of field enumeration through oral information from respondents. Full time field staff consisting of two fieldmen and one Research Associate (Supervisor) were deployed for data collection. Two separate schedules—one for vilage level information and another for the household information—were canvassed during the course of survey. On an average, 5 household schedules were canvassed by a fieldman in a day. Average time taken in filling a schedule was about one hour. In case of non-response next house hold in the select list was covered.

Data Processing

5.4 All the canvassed schedules were involved in processing of data which was done manually. Findings of the survey were made available in June, 1985.

ECONOMIC AND STATISTICAL ORGA NISATION, HARYANA, CHANDIGARH

and distribution programme.

6. Evaluation study of the impact of seed production

Introduction

6.1 At the instance of Govt. of Haryana, Economic and Statistical Organisation, Haryana. Chandigarh conducted this adhoc survey. Main objectives of the survey were (i) to sutdy the manner and extent of production of certified seeds viz. paddy, bajra, cotton and wheat and their distribution, (ii) to estimate the utilisation of these seeds and their impact on productivity, (iii) to know the views of seed growers and seed distributing agencies about the programme and (iv) to seek opinion of the beneficiary and non-beneficiary farmers about the certified seeds. Broad heads of information included in the survey were quantity of certified seeds produced, quantity distributed, area covered under certified seeds and non-certified seeds, yield rate etc. Four districts namely Hissar, Jind, Kurukshetra and Mahendergarh in the state of Haryana were covered under the survey. Schedules designed for the survey were pretested in the field. Agriculture years 1981-82 to 1983-84 was treated as reference period for the survey.

Sampling Design

6.2 Multistage stratified sampling design was used in the survey, with district, agriculture circles, villages, beneficiary/non-beneficiary farmers and seed growers as sampling units at various stages. Four districts out of 12 which had been allocated maximum certified seeds of paddy, bajra, cotton and wheat during 1983-84 were selected for the survey at first stage. Treating districts as strata. a sample of 3 circles, one with maximum the other with medium and third with the least allotment of certified seeds in each strata was selected. Then in each selected circle, one village of medimum size (population) was selected. In each of the selected villages, a list of about 100 farming families was prepared and from this list a sample of 10 beneficiary farmers was taken following systematic random sampling technique. A sample of 5 non-beneficiaries in each selected village was also taken for the survey. Further, a sample of 5 per cent of seed growers of the identified crop (with a maximum number of 20 and a minimum of 10) was selected from each of the three project areas producing wheat, paddy and cotton. These seed growers were surveyed only in two such villages where required number of seed growers were available. All the Government/semi-

Govt. seed distributing agencies located at one of the selected block headquarters in each district were also canvassed. Thus, total sample of the survey consisted of 4 districts, 12 circles, 12 villages, 110 beneficiary farmers, 52 non-beneficiary farmers, 35 seed growers and 22 seed distributing agencies.

Field Work

6.3 Field work was conducted during November, 1984 to April, 1985 by spending about 70 mandays. Field enumeration method was followed for the field work and data were collected through oral information from respondents and by going through records maintained by various Govt. and non-Govt. agencies. Four regular and full time staff consisting of 3 Asstt. Research Officers and one Computor was deployed for field job. The staff was well experienced in the field work. They were, also imparted requisite training before their deployment in the field. Supervision of field work was done by one Dy. Economic and Statistical Adviser and one Research Officer. A

total of 219 schedules were canvassed during the survey. As a workload norm, every field investigator was required to prepare a list of 100 farming families in a village and canvass 10 beneficiary farmers schedules and 5 non-beneficiary farmers schedules in a period of 2 to 3 days. Every investigator was similarly required to canvass 5 to 10 seed growers schedules or 6 to 7 distributing agencies schedules within a period of 2 days. On an average one hour was spent to fill-in a schedule.

Data Processing and Report

6.4 All the 219 schedules canvassed were involved in data processing. The entire data were complied and tabulated at the Headquarters of the Economic and Statistical Organisation by 3 Asstt. Research Officers. The report entitled "Evaluation study of the impact of seed production and distribution of Foodgrains". had been prepared and was reported to be under approval with the Govt. of Haryana.

DEPARTMENT OF PLANNING, HIMACHAL PRADESH, SHIMLA

7. Evaluation Study of Horticultural Programme in Shimla and Kullu districts.

Introduction

7.1 This was an adhoc survey conducted by the Department of Planning, Himachal Pradesh. Shimla in the two districts of the State, namely Shimla and Kullu. The objectives of the survey were (i) to make an overall assessment of the economy of horticultural and other allied activities such as bee-keeping horticulture based industries, raising of nurseries, transportation and marketing of fruit products etc.; (ii) to work out estimates of per household income from horticulture and allied activities mentioned in (i); and (iii) to analyse the problems encountered by the horticulturists and to suggest remedial measures. The broad subject heads on which the information was collected related to socio-economic profile of the horticulture household, development of horticultural activities among the sample households, cost benefit analysis of horticultural pursuits of the households and income from occupations allied to horticulture. Reference period for all the information collectetd related to the years 1979, 1980 and 1981.

Sampling Design

7.2 At the first stage Shimla and Kullu districts of the state were selected purposively being major fruit producing areas of the state. At the second stage, 3 blocks of Shimla district, namely, Jubbal-Kotkhai, Kumarsain and Rohru blocks were selected because these were the major fruit growing blocks in the district. Similarly in the Kullu district the largest fruit growing block, Kullu, was purposively selected. Each of the four blocks was treated as separate stratum. From each of these stratum a sample of 5

percent of villages having horticultural activities was first taken and then from each of these selected villages a sample of 20 percent of horticultural households was selected, following systematic random sampling technique in each area. The total sample thus selected in the two districts was 399 horticultural households.

Field Work

7.3 The field work was completed in a period of 128 mandays. Data were collected following field enumeration method by recording oral information from respondents through 3 types of schedules namely, the village listing schedule, the houselisting schedule and the household schedule. Two technical Assistants, two Statistical Assistants and one Computor were assigned the task of collecting information from the field. All the field staff were regular employees and well experienced in the field work. As a work load norm, every field worker was expected to canvass 3 household schedules in a day.

Data Processing and Report

7.4 All the 399 schedules canvassed were included in data processing. The entire data were complied deployed on scrutiny, editing and coding of the schedules. The basic compilation of data was done by one Programme Planning Officer, One Technical Assistant and one Statistical Assistant. The pre-tabulation processing of data took about 278 mandays. The tabulation was done manually with the help of calcultators in a period of 30 mandays. The report entitled "Evaluation study of horticultural programme in Shimla and Kullu districts" was finalised in Decembe, 1985 and was reported to be under print. The cost of the survey was approximately Rs. 22.5 thousand.

DIRECTORATE OF ECONOMICS AND STATISTICS, KARNATAKA, BANGALORE

8. Crop estimation survey on fruits, vegetables and minor crops.

Introduction

8.1 This was an adhoc survey conducted by the Directorate of Economics and Statistics, Govt. of Karnataka, Bangalore at the instance of Ministry of Agriculture, and Rural Development Govt. of India. The main objective of the survey was to estimate the area under different fruits and vegetables and their production and yield rates. The crops covered under the survey were banana and mango under fruit crops, and onions and potato under vegetable crops. Fourteen districts were taken for survey in respect of fruit crops and 9 districts in respect of vegetable crops.

Sampling Design

8.2 A multi-stage stratified random sampling technique was adopted for the conduct of the survey. At the first instance, 16 districts were selected on the basis of their area under fruit and vegetable crops, each of which constituted a stratum. Under each of these districts the taluks which accounted for more than 800 hectares under mango crop and more than 400 hectares under other selected fruits and vegetables formed the major substrata. The remaining taluks of the district clubbed together formed a single minor sub-strata. In the selected district all the taluks belonging to the major sub-strata were covered for the suvey. In the minor sub-stratum two taluks were selected at random for the survey. In the major sub-strata, from each taluk 5 villages and in the minor sub-stratum 4 villages were selected at random for area enumeration from each of the 2 taluks selected. If more than one crop was selected in a taluk for fruits and vegetables survey, the villages selected at random for one crop was also considered for survey in respect of other crops. For yield estimation survey 40 percent of the villages selected for area enumeration survey were selected at random in both major and minor areas growing experimental crop. In each of the selected villages two orchards growing the selected fruit crop were chosen at random and then a cluster of 4 trees was selected in each orchard for recording yield data in the following manner.

In the selected orchard starting from South West corner, numbers were given to the bearing trees starting from 1 moving from south west forwards East and coming once again to the West and again

moving towards East. After numbering the trees, the radom number column which was equal or less than the total number of trees was used for selecting a radom key tree. After selecting the keytree, other these trees, which were nearest to the key tree, were selectd and a permanent number was marked on these trees for recording the yield as and when the fruits were harvested. If the experimental trees or plants were planted systematically row-wise then first the random row was selected using the random number table. Then in the selected row a key tree was selected using the radom number tables after numbering the bearing trees and a cluster was formed.

For crop cutting experiments on the selected vegetable crop two survey numbers were selected at random from each of the villages selected for yield estimation survey. The size of the experimental plot in each survey number was fixed as 5 metres $\times$ 5 metres.

Field Work

8.3 The field work started on 1st October, 1985 and was expected to be completed by the 7th May, 1986. Field enumeration method was adopted for collecting information on various aspects. Information was collected by recording oral information from respondents, by going through Revenue Records, by visual observation and direct measurement. Twenty Statistical Inspectors working in District Statistical Offices conducted the field work of the suvey under the supervision of Statistical Inspectors of the Directorate of Economics and Statistics and the District Statistical Officers of the selected 16 districts. Training was imparted to primary and supervisory staff at Bangalore, Hassan and Dharwar, before their deployment in the field. Ten percent of the field work was supervised. The District Statistical Officer was made responsible for execution of the field work as per time schedule in his district. Data were collected through a set of 6 schedules.

Data Processing

8.4 Data processing including tabulation, was to be done at the Headquarters of the Directorate at Bangalore by 3 Asstt. Statistical Officers and 2 Statistical Inspectors under the guidance of one Deputy Director and a Joint Director. Tabulation was to be done manually with the help of calculators. The first set of tables was expected to be ready by December, 1986. The survey was expected to cost approximately Rs. 7 lakhs.

BUREAU OF ECONOMICS AND STATISTICS, ORISA, BHUBANESWAR

9. Studies on comparative performance of mixed farming involving crop. livestock, poultry and fish in Orissa.

9.1 At the instance of Indian Council of Agricultural Research, New Delhi, the Bureau of Statistics,

Orissa, Bhubaneshwar conducted this adhoc survey. The survey started in September, 1984 and was continued during the year under reference. Technical details etc. of this study were reported in the 36th Report on "Sample Surveys of Current Interest in

India at survey number 8. No major changes were made during the year under reference.

10. Sample survey for study of constraints in the transfer of new agricultural technology under field conditions.

Introduction

10.1 This was an adhoc survey undertaken by the Bureau of Economics and Statistics, Orissa, Bhubaneshwar at the instance of the Indian Council of Agricultural Research, New Delhi. The main objectives of the survey were to (i) develop suitable sampling methodology for studying the effect of new agricultural technology including high yielding|improved varieties, fertilizers, plant protection chemicals and cultural and management practices, for increasing productivity of land; (ii) determine the extent to which the potential of high yielding|improved varieties has been achieved under field conditions; and (iii) identify and investigate the constraints and limiting factors in the transfer of new agricultural technology to cultivators, fields. The programme consisted of two types of surveys namely (i) agronomic and agro-economic enquiry and (ii) yield estimation survey. The agronomic and agro-economic survey was conducted for determining the spread of high yielding varieties and studying the constraints in the adoption of high yielding variety seeds, extent and intensity of adoption of improved agricultural practices and reasons for their non-adoption. For this purpose data on total cultivated areas and areas under HYV, soil, climatic factors, crops grown, inputs, credit availability and utilization, factors limiting the adoption of HYV seeds and other components of improved agricultural technology etc. were collected. The yield estimation survey was conducted for determining the yield rate of HYV under cultivators conditions. For this survey, crop cutting experiments were conducted in a sample of 60 fields per crop per season in each selected district. An equal number of experiments were conducted on indigenous varieties of these crops. The survey was conducted in two districts viz;. Cuttack and Puri.

Sampling Design

10.2 A stratified two stage random sampling design was adopted for this enquiry. Each district selected for the survey was divided into homogenous strata, by combining Development Blocks|Tehsils suitably on the basis of geographical contiguity.

Agronomic and Agroeconomic Enquiry

A statified two stage random sampling design was adopted for this enquiry. Each district selected for the survey was divided into homogenous strata, by combining Development Blocks| Tehsils suitably on the basis of geographical contiguity, agro-climatic and soil conditions. topography, rainfall, cultivated area etc. The villages and cultivators in the villages growing major cereals|pulses'oilseeds formed the first and second stage sampling units respectively. In all, 60

villages were selected in each district. The distribution of 60 villages among strata was done in proportion to gross-cropped area. From each stratum at least two villages were selected. From each of the selected villages a sample of 8 cultivators was selected. These cultivators were canvassed during kharif and rabi seasons in an agricultural year.

Yield Estimation Survey

The sampling design conformed to stratified four stage random sampling, the strata being the same as for agronomic and agroeconomic enquiry. The villages and the cultivators constituted the first and second stage sampling units. The fields growing the high yielding variety of crops and experimental plots for crop-cutting located in them formed the third and fourth stage sampling units respectively. The sample at the first stage consisted of 60 villages already selected for agronomic and agro-economic enquiry. For conducting crop-cutting experiments out of 8 cultivators already selected for agronomic and agro-economic enquiry in the village one cultivator was selected randomly. Then one field sown with high yielding variety of the selected crop was randomly selected out of all such fields of the selected cultivator. At the ultimate stage, an experimental plot for conducting crop-cutting experiment was located randomly in selected field.

For obtaining comparable yield rates of local varieties of selected crops, one cultivator out of the 8 cultivators already selected for agronomic and agro-economic enquiry and growing local varieties of the selected crop was selected. One field sown with local varieties of the crop out of all such fields of the selected cultivators was randomly selected and finally a plot was randomly located in the field for conducting crop-cutting experiment. Thus, in each district 60 crop-cutting experiments were conducted on each high yield and local varieties of crops every season.

Field Work

10.3 The field work started in the month of November, 1985 and was expected to continue for 3 years. At the time of reporting the survey about 840 mandays were spent in the field. The data were being collected through field enumeration method, by going through establishment records, recording oral information from respondents, visual observation, direct measurement etc. In all, six full time Statistical Investigators were appointed on adhoc basis for the whole period of the project. They were imparted necessary training by the officers of Indian Agricultural Statistical Research Institute, New Delhi before their deployment in the field. The officers of the District Statistical Offices and Bureau's Headquarters conducted concurrent and post-enumeration checks including surprise field checks every month. The percentage of field supervision was to the extent of about seventy. A total of 3360 schedules were canvassed by the end of kharif season of 1985-86. As a work load norm, every field worker was expected to contact 2 households per day and conduct 3 crop-cutting experiments per week. On an average, 30 minutes were spent in filling a schedule. No non-response was observed.

AGRO-ECONOMIC RESEARCH CENTRE, VISVA BHARATI, SHANTINIKETAN

1. Economics of groundnut cultivation in Orissa.

Introduction

11.1 The Agro-Economic Research Centre, Visva Bharati, Santiniketan conducted this adhoc study at the instance of the Union Ministry of Agriculture and Rural Development, New Delhi. The main objectives of the study were (i) to enquire into the factors contributing to the rise in both area and productivity of groundnut in the state and (ii) to study the problems of marketing of groundnut at the farm level. The broad subject heads on which information was collected were area under groundnut cultivation, its production, quantity sold and channels of marketing. The study was confined to two districts, namely, Sambalpur and Cuttuck in Orissa, Agriculture year 1984-85 treated as the reference period.

Sampling Design

11.2 From each district one block with highest incidence of groundnut cultivation was selected and from each selected block one village was chosen with the same criterion. In the selected villages, information in respect of land operated and area of land devoted to the groundnut cultivation for each household was collected. Then all the groundnut cultivating households were classified into four land holding groups viz.;

households having land (i) up to 1 hectare, (ii) 1-2 hectares, (iii) 2-4 hectares and (iv) above 4 hectares. In each of these groups, households were arranged in descending order of the percentage of groundnut area to total cropped area and then from each group top eight households were chosen for the study.

Field Work

11.3 The field work of the survey was carried out during December, 1984—February, 1985. The relevant data were collected by the method of field enumeration through oral information from respondents. Full time staff consisting of two fieldmen and one Research Associate|supervisor were deployed on survey work. Two different types of schedules—one for the village level information and another for the household information—were canvassed. It took about an hour to canvass one schedule. In case of non-response next household to the selected household in the household list was covered.

Data Processing

11.4 All the canvassed schedules were involved in processing of data which was done manually with the help of calculators. Findings of the study were made available in May, 1985.

DIRECTORATE OF ECONOMICS AND STATISTICS, MADHYA PRADESH, BHOPAL

12. Socio-economic survey of water management areas of existing medium irrigation projects Ajnal and Saroda in Madhya Pradesh.

Introduction

12.1 This was an adhoc survey conducted by the Directorate of Economics and Statistics, Bhopal at the instance of World Bank. The objective of the survey was to prepare socio-economic profile of the cultivators of the command proposed for water management areas of existing medium irrigation projects Ajnal and Saroda, in Bhopal and Rajnandgaon districts respectively of the state of Madhya Pradesh. The broad subject heads on which the data were collected were land use, cropping pattern, inputs, production and disposal of agricultural produce rotational water supply, water rates, maintenance of water course etc. No pilot survey was conducted prior to the main survey. However, a similar survey in respect of Satak and Chillar projects was conducted during 1984 and reported at Sl. No. 7 of the 36th Report of this series. Reference period for collection of information on various aspects of the survey was the year 1984-85.

Sampling Design

12.2 A systematic random sampling technique was adopted for the conduct of the survey. All the four villages under the Ajnal project and 5 villages in Saroda project were covered. The sampling units consisted of cultivator households operating land in the villages of the projects. For selection of cultivator household at the first instance in each village, an outlet wise list of survey numbers alongwith the names of the cultivators was prepared with the help of the records maintained at the projects. At the second instance the listed survey numbers were rearranged cultivator-wise in each village to give the sampling frame for selection of cultivator households. Out of this list a sample of 25 cultivator households was drawn per village following the systematic random sampling technique. Thus out of a total of 109 cultivator households under the Ajnal project 74 cultivators were selected. In Saroda project out of 500 cultivator households a sample of 125 cultivators was drawn.

Field Work

12.3 The field work for Ajnal and Saroda projects was done during the months of April, 1985 and June, 1985 respectively, by spending about 20 mandays for each project. Data were collected through field enumeration method by recording oral information from respondents. Four fulltime and regular investigators and one Asstt. Director of the Directorate were deployed on field jobs in Ajnal project, and 5 Investigators, one Asstt. Statistical Officer and one Asstt. Director were deployed for Saroda project. Supervision was done by one Asstt. Director posted at the Head Quarters. Data was collected through two types of schedules. On an average each Investigator was required to conduct 25 interviews per village. Average time taken to fill-in a schedule was one hour.

Data Processing and Report

12.4 All the questionnaires canvassed were involved in data processing. Two persons were deployed on scrutiny of the data and 4 persons were deployed on editing for both the projects separately. About 100 mandays were spent on pretabulation processing jobs in each of the projects. Tabulation of data was done manually with the help of facit electric calculators and completed in 100 mandays in each of the projects. Cent percent verification in tabulated data was done to ensure accuracy. The reports entitled "Socio-economic survey of water management area of existing medium irrigation project Ajnal" and "Socio-economic survey of water management area of existing medium irrigation project Saroda" were published in August, 1985 and December, 1985 respectively. The total project was to cost about Rs. 8200|- (Rs. 3350|- for Ajnal project and Rs. 4850|- for Saroda Project.)

ECONOMIC AND STATISTICAL ORGANISATION, PUNJAB, CHANDIGARH.

13. Survey regarding estimation of gross fixed capital formation in private fish farms in Punjab.

Introduction

13.1 This ad hoc survey was conducted by the Economic and Statistical Organisation, Punjab, Chandigarh with the main objective of preparing estimates of gross fixed capital formation in private fish farms in the state as a whole. The broad subject heads on which information was collected were particulars of fish farms, expenditure incurred on fixed assets cognate to fish farms, sources of financing and production and sale of fish. The reference period for collection of information on various items was the year 1979-80 to 1983-84.

Sapling Design

13.2 A stratified unistage simple random technique was adopted for the conduct of the survey. Each of the 12 districts in the State was treated as a stratum and private fish farms established during the years 1979-80 to 1983-84 in the stratum were taken as first stage sampling units. A sample of 10 per cent fish farms was drawn from each district randomly. The total sample size consisted of 121 fish farms at the state level.

Field Work

13.3 The field work was started on 17 February, 1985 and completed on 28 April 1985 by spending 150 mandays. The field enumeration method was adopted for collection of information and data were collected by recording oral information from the respondents. Only one questionnaire was canvassed for one farm. Four Technical Assistants who were regular employees of the Economic and Statistical Organisation and who received requisite training before the commencement of the survey were deployed for the field work. As a workload norm, every field investigator was expected to canvass one schedule per day. Supervision of the field work was exercised by two Research Officers, one Deputy Econoimic and Statistical Adviser and one Joint Director. Further, twenty five per cent of the questionnaires were checked on the spot. Out of 121 fish farms selected for the survey, information could be collected in respect of 113 farms only.

Data Processing

13.4 The information collected was processed by 6 persons in 60 mandays. Data were tabulated manually by using electronic calculators in a period of 300 mandays. For reducing errors of data processing about ten per cent manual verification of schedules was done.

Report

13.5 The first sets of tables were ready by November, 1985 and the final report captioned "Estimates of gross fixed capital formation for private fish farms in Punjab 1979-80 to 1983-84" was expected to be sent to the press in February, 1986 for publication. The total estimated cost of the survey was of the order of Rs. 36,500'-.

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, NEW DELHI

14. Sample surveys on estimation of production of major livestock products—milk, eggs, wool and meat.

Introduction

14.1 These annual surveys were initiated by the Department of Agriculture and Cooperation, Government of India and Directorates of Animal Husbandry of State|Union Territory Governments with the main objectives of obtaining estimates of livestock numbers and livestock products and collecting information on animal husbandry attendent practices adopted in various parts of the country. The broad subject heads on which the information was to be collected during the surveys related to (i) details of animals and birds kept by the households, (ii) feed and fodder used for the animals|birds, (iii) production of milk, eggs, wool and meat, and (iv) utilisation of dung, milk eggs and meat. The sampling methodology for these surveys was developed by the Indian Agricultural Statistics Research Institute on the basis of pilot surveys conducted in the past. The surveys envisaged collection of data in respect of different characteristics during different seasons viz., summer, monsoon and winter.

Sampling Design

14.2 A stratified multistage random sampling design was adopted for the survey. The districts were treated as the strata. The villages, households and animals| birds served as first, second and third|ultimate stage sampling units. In the districts chosen for district level estimation, 20 villages were selected whereas in other districts 5 villages were selected for the survey.

In the districts selected for district level estimation 560 households were selected for estimation of milk (2 cows|buffaloes in milk and all goats in milk in each selected household) per district while 1400 households were selected for estimating production of eggs (all laying birds in each selected household) per district. In other districts for milk and egg production 140 households and 350 households were selected respec-

tively. In other districts for estimating wool production 145 flocks|households per district were selected while, for estimating meat production 8 slaughter houses per district were selected. In addition, 5 per cent of the villages were completely enumerated in the first fortnight of each season in all the districts for estimation of number of animals in milk|laying birds etc.

Field Work

14.3 This was an annual programme and data were collected in four rounds consisting of one month each in a season viz., summer March to June, mansoon 1 July to 31 October and winter 1 November to 28|29 February. Data were collected through field enumeration method by recording oral information from respondents, actual weighment|counting and measurement. The field work was conducted by regular, full time and experienced staff of the state governments. They were, however, imparted requisite training before their deployment in the field. Supervision was exercised both by the senior staff and officers of the State Department and Department of Agriculture and Cooperation, Government of India. Every field worker was allotted five villages and he was required to collect information on all the four products i.e. milk, eggs, wool and meat. On an average, he was expected to spend 45 minutes on a household. The survey was in the initial stages in some of the states at the time of reporting.

Data Processing

14.4 The survey envisaged that the data collected were to be processed manually by the head quarters staff of the state|union territories.

Report

14.5 The states which undertook these surveys were expected to finalise the reports and publish them on annual basis. These surveys were estimated to cost about Rs. 2.5 crores during the Seventh Five Year Plan period.

ECONOMIC AND STATISTICAL, HARYANA, CHANDIGARH

15. Evaluation study of Indo-Australian Cattle Breeding Project, Hissar.

Introduction

15.1 This was an ad hoc survey conducted by Haryana Government with a view to assessing the performance and impact of the programme, ascertaining the short-comings and bottlenecks in its implementation and suggesting necessary corrective measures for improvement therein. The survey was conducted in 9

Cattle Breeding Centres which covered all the blocks in the Hissar district. The broad subject heads on which the information was collected related to (i) working of the project at the farm, (ii) performance of the programme in the field, (iii) views of the beneficiaries about artificial inseminization of cattle, availability of medical aid and fodder for the cattle and suggestions for imporvement of the project, and (iv) reasons far not opting for artificial inseminization. No pilot survey as such was conducted. Reference period was the year 1982-83 to 1984-85.

Sampling Design

15.2 A three stage sampling design was adopted. At the first stage 9 centres which supplied frozen semen during 1980-81, out of a total of 28 centres, were selected purposively. Similarly at the second stage from each of the 9 centres, one village in which the maximum number of artificial inseminization was done was selected purposively. At the third stage, 10 beneficiaries and 2 non-beneficiaries were selected from each village following systematic random sampling technique.

Field Work

15.3 The field work was conducted during September, 1985 by spending 36 mandays. Data were collected through field enumeration method. The field work was done by one Research Officer and two Asstt. Research Officers who were regular and experienced staff of the Economic and Statistical Organisation, Haryana. They were, also given necessary instructions before their deployment in field. A total of 9 centre-schedules, 10 beneficiary schedules and 19 non-beneficiary-schedules were canvassed during the course of survey.

Data Processing and Report

15.4 Total of 117 schedules were processed manually by two Asstt. Research Officers and one Computor by spending 60 mandays. The report entitled "Evaluation Study of Indo-Australian Cattle Breeding Project, Hissar" was yet to be finalised at the time the survey was reported.

DEPARTMENT OF ANIMAL HUSBANDRY, GOVERNMENT OF PUNJAB, CHANDIGARH.

16. Cost of Milk Production study.

Introduction

16.1 This was an ad hoc survey conducted by the Department of Animal Husbandry, Government of Punjab with the main objective of building up an index of cost of milk production in Patiala district of the state. The broad subject heads on which the information was collected related to individual animals kept by the households, prices of feed and fodder, wage rates payable to the workers employed, feeding practices, maintenance practices, milk yield and expenditure incurred on sheds, utensils etc.

Sampling Design

16.2 A three stage sampling design was adopted for the survey. Out of five tehsils in Patiala district, two tehsils viz., Patiala and Sirhind were selected at random as the first stage units. From each tehsil clusters of three villages were selected as the second stage units randomly. At the final stage, from each of the villages selected at the second stage, a sample of four households was selected.

Field Work

16.3 The field work started in October, 1984 and was expected to be completed by the end of September, 1986. The required information was collected through field enumeration method by interviewing the members of households and by actual weighment of milk. Five Junior Field Investigators/Milk Recorders of the Department of Animal Husbandry did the field work. They were imparted requisite training before the commencement of field work. Periodical training programmes were also arranged for them during the course of survey. The survey was conducted under the overall control of Deputy Director (AHS), Chandigarh. The supervision of field work was assigned to Deputy Director, Animal Husbandry Patiala and Officer-in-charge Milk Recording and Technical Assistant, Patiala. Information in respect of various characteristics was collected through a set of five schedules. Every Investigator was allotted nine villages for collecting data for the whole period of survey. He was expected to canvass all the five types of the schedules pertaining to the villages allotted to him.

Data Processing

16.4 The survey was in progress at the time of reporting.

DIRECTORATE OF ANIMAL HUSBANDRY, UTTAR PRADESH, LUCKNOW.

17. A rapid survey for estimating the number of bullocks over 15 years and their cost in Bundelkhand region of U.P.

Introduction

17.1 This as an ad hoc survey conducted by the Directorate of Animal Husbandry, Uttar Pradesh, Lucknow. The main objective of the survey was to estimate the number of bullocks over 15 years of age and amount of compensation that was required to be paid to the owners of these bullocks if they were to be removed from Bundelkhand region of the state. The survey was restricted to Bundelkhand region only. The estimates were required at district and region level. The broad subject heads on which the data were collected were (i) the number of households keeping bullocks over 15 years, (ii) estimated cost of these bullocks and reason for keeping them, and (iii) the views of the households about sending these bullocks to 'gosadan' (cattle house). The reference period was the date of survey.

Sampling Design

17.2 A stratified random sampling technique was adopted for the survey. Each of the five districts of the Bundelkhand region were treated as seperate stratum. From each of these strata, a sample of 25 per cent of blocks was drawn. At the second stage, a sample of 2 villages from each of the selected blocks was drawn. The households having bullocks over 15 years of age were treated as final units of sample for the survey. The total sample size thus consisted of 12 blocks, 24 villages and 108 households.

Field Work

17.3 The field work started on 26 August, 1985 and was completed on 10 September, 1985 by spending about 80 mandays in the field. Field enumeration method was adopted for the survey and data were collected through oral information from households. Investigators-cum-Computors posted under the households Adhoc Survey Cell of the Directorate of Animal Husbandry conducted the field work under the supervision of Field Officer and Statistician of the cell. Two types of schedules were used for collecting various details of the survey. A total of 132 schedules were canvassed. Average time taken to fill-in a schedule was two hours.

Data Processing

17.4 All the 132 schedules canvassed were involved in data processing. The processing was done by 4 Investigators-cum-Computors within a short period of 8 mandays. Tabulation of data was done manually with the help of calculators by spending about 40 mandays.

Report and major Findings

17.5 The report enitled " A rapid survey for estimating the number of bullocks over 15 years and their cost in Bundelkhand region of Uttar Pradesh" has been released. The major findings are (i) about 3.55 per cent of animal keeping households kept bullocks over 15 years of age, (ii) the bullocks over 15 years formed a very negligible proportion of 1.19 per cent of the total Govanshiya (cattles), (iii) the estimated total number of bullocks over 15 years was 25657, (iv) the average age of the bullocks over 15 years was 16.52 years, (v) the average sale price for such bullocks worked out to be Rs. 143 per bullock, (vi) 52 per cent of the households keeping bullocks over 15 years were inclined to send their bullocks to 'gosadan' (cattle house) whereas 48 per cent were not inclined to send them to 'gosadan' and (vii) out of the households interested in sending their bullocks to 'gosadan' 21 per cent desired compensation for sending their bulloks whereas 56 per cent did not desire any compensation but desired only transportation facilities for 'gosadan'.

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18. A rapid survey for studying the causes of decrease in the population of Jamunapari Goats in the villages of Chakranagar Block of Etawah district in U.P.

Introduction

18.1 This was an adhoc survey conducted by the Directorate of Animal Husbandry, Uttar Pradesh, Lucknow with the main objective of studying causes for decrease in the number of Jamunapari goats and difficulties faced in the upkeep of this variety of goat and suggesting remedial measures. The study was confined to only those villages of Chakranagar block which were benefitted by the Goat Breeding Centre, Chakranagar. The broad subject heads on which the information was collected related to village-wise livestock census of the block, the different breeds of goats, size of holdings and age and sex-wise number of goats. The reference period for the survey was the years 1972, 1978 and 1985.

Sampling Design

18.2 Out of 35 villages falling under Chakranagar block, 24 villages were found to have benefitted by the Goat Breeding Centre, Chakranagar. A sample of 75 percent of these benefitted villages was drawn following simple random sampling technique. In the selected villages numbering 18, all the households keeping Jamunapari goats were surveyed.

Field Work

18.3 It was a rapid survey conducted within a short period of one week during the second week of April, 1985, by spending about 50 mandays in the field. Field enumeration method was adopted and data were collected by seeking oral information from respondents and by going through official records. Data were collected by Investigators-cum-Computors of the Directorate under the supervision of Field Officer and Statistician. Data were collected through 3 types of schedules. A total of 700 schedules were canvassed during the course of survey. On an average, every field worker was required to interveiew 70 house-holds. It took about half an hour to fill-in a schedule.

Data Processing

18.4 All the 700 schedules were processed at the Central Office by 4 persons by spending about 10 mandays. Tabulation of data was done manually with the help of calculators. It took about 50 mandays to finalise the tables.

Report and the main Findings

18.5 The Report entitled "Rapid survey for studying the causes of decrease in the population of Jamunapari goats in the villages of Chakranagar

block of Etawah district" has since been published. The main findings of the survey were (i) out of the total of 2267 households, about 36 percent were keeping goats and from among the households keeping goats 74 percent were keeping Jamunapari goats, (ii) about 66 percent of the households keeping Jamunapari goats belonged to schedule castes and backward clases, (iii) Breedwise, Jamunapari goats accounted for 84 percent of their total population in the villages surveyed as on the date of survey and (iv) about 87 percent of the households had reported that the fall in the number of Jamunapari goats was attributable to paucity of grazing lands, lack of Govt. assistance and lack of sales facilities.

19. Survey for studying the utility of bucks located at Veterinary Hospitals under goat development programme.

Introduction

19.1 The Department of Animal Husbandry, Uttar Pradesh has been operating various schemes to improve the milk yield and productivity of meat of goats in the state. Though the state has a good breed of goats like Jamunapari and Barbari goats the stocks of these breeds was confined to certain parts of the state and their number was very limited in other parts of the state. With a view to developing these breeds of goats in the plains of the state, the bucks of these varieties were kept at Veterinary Hospitals in these areas which could provide the facility of artificial insemination. This ad hoc survey which was conducted by the Department of Animal Husbandry at the instance of the State Government aimed at (i) studying the utility of the high-breed bucks kept at the Veterinary Hospitals and the extent to which there has been improvement in this breed of the goat, (ii) studying the benefits accrued to the goat-keeping households by the scheme and (iii) evaluating the comparative performance of Jamunapari and Barbari breeds of goats. The survey was conducted in all the divisions of the State except hilly divisions. The broad subject heads on which the information was collected related to details of households, details of goats kept by the households during the last 3 years and details of goats provided artificial insemination during the last five years and details of milk produced.

Sampling Design

19.2 A stratified random sampling technique was adopted for the conduct of the survey. The administrative divisions of the state were treated as separate strata. From each stratum, one district was selected following simple random sampling procedure. For selection of second stage units, a list of Veterinary Hospitals where bucks were kept for insemination, was prepared for each selected district and a sample of 20 percent of these hospitals, subject to a minimum of 2 hospitals, was drawn. At the final stage, 10 households benefitting from the scheme were selected from amongst the households availing of the insemination facilities from each of the selected hospitals. The total sample size thus selected consisted of 10 districts, 25 veterinary hospitals and 249 goat-keeping households.

Field Work

19.3 The field work was done during March, 1985 to July, 1985 by spending about 100 man-days. Data were collectetd through field enumeration method by seeking oral information fro mrespondents and by going through records maintained at the Veterinary Hospitals. Investigator-cum-Computors were deployed for field job under the supervision of Field Officer and Statistician posted under the Ad hoc survey cell of the Animal Husbandry Department. Two types of schedules were used for collection of various details of the survey. A total of 275 schedules were canvassed during the survey period. On an average each Investigator-cum-Computor was required to interview 50 households. Average time taken to fill in a schedule was about 1 hour.

Data Processing

19.4 All the 275 schedules were processed by Investigators-cum-Computors in a period of 15 man-days. Data were tabulated manually with the help of calculators by the Field Officer and the Statistician in about 150 man-days.

Report and the major Findings

19.5 The Report entitled "An ad hoc survey for studying the utility of bucks located at Veterinary Hospitals under the goat development programme of the Veterinary Department" was finalised and is reported to be under approval with the Government. The major findings are (i) during 1984-85 the average insemination done on a Barbari breed of buck increased from 44 to 69 whereas in the case of Jumunapari breed of buck it increased from 17 to 80 goat per buck, (ii) about 56 per cent of beneficiary goat-keeping households were engaged in agriculture as their main occupation, (iii) on the day of survey, on an average beneficiary households had 3 goats out of which one was male and 2 were females, (iv) about 50 percent of goats were of Barbari breed, whereas the indigenous variety was of the order of 49 percent; a very negligible one percent were Jamunapari goats, (v) Barbari goats formed the maximum proportion of goats taken to hospitals for insemination, (vi) the perecentage of pregnant goats from amongst the goats taken to hospitals increased from 96.47 in 1981-82 to 97.15 in 1983-84, (vii) about 96 percent of households were keeping goats for production of milk and for earning money by sale of goats,

(viii) about 89 percent of the households took their goats for insemination for production of better breed of goats, (ix) 79 per cent of the households were stated to have benefitted on account of higher milk yield as a result of insemination of the high breed

bucks at the Veterinary Hospitals, 69 percent observed that the goats fetched more money on sale as a result of increase in their physical weight after insemination and 42 percent observed that they gained by increased reproductivity in these goats.

ECONOMIC AND STATISTICAL ORGANISATION, HARYANA, CHANDIGARH

20. Evaluation study of the quality of Science Education in High School.

Introduction

20.1 This was an adhoc survey conducted by Haryana Government with the main objective of assessing the quality of science education in Government High Schools in the State. The survey covered Rural and Urban Government Schools in three selected districts of the state teaching science subjects. The broad subjects on which the information was collected during the survey related to adequacy of science teachers in High Schools vis-a-vis norm and workload, extent of availabiltity of various facilities in science laboratories and views of science teachers on various aspects of science education namely, conduct of science practicals, standard and availability of science text books, science syllabus prescribed, utilisation of funds available for science education etc. In addition, opinion of students of IX and X classes were also obtained on these aspects. Before the conduct of the main survey discussions were held with the authorities in the Education Department and schedules and other technical details were finalised in consultation with them. The schedules were pre-tested in the field before launching the main survey. Reference period for both primary and secondary data were the year 1984-85 and the date of survey.

Sampling Design

20.2 A combination of purposive and stratified random sampling technique was adopted for the survey. In the first instance three districts, one each representing maximum medium and minimum rates of literacy were selected purposively. At the second stage, high schools in the selected districts teaching science education were divided into two strata, stra-

tum I consisting of schools in the rural areas and stratum-II falling in the urban area. A sample of 10 percent of the schools was drawn from each of the two strata (with a minimum of 2 urban schools) following systematic random sampling technique. At the third and fourth stages, two science teachers and two students each from class IX and X were selected at random from each of the selected schools in the two strata. The total of samples thus drawn consisted of 3 districts, 33 high schools, 48 science teachers and 132 students.

Field Work

20.3 The field work was done during the period September to November, 1985 by spending 70 mandays. Two Asstt. Research Officers and one Computor who were regular and full-time employees of the Economic and Statistical Organisation were deployed for canvassing the schedules. The staff was well experienced in the field work and was associated with the pre-testing of the schedules. Data were collected through field enumeration method by seeking oral information from school teachers and students, and by going through the records maintained by the schools. Normally two days were spent by a field staff in canvassing one school schedule, interviewing one or two teachers and four students. Supervision was exercised by one Deputy Economic and Statistical Adviser and one Research Officer by conducting concurrent checks.

Data Processing and Report

20.4 All the 313 schedules canvassed were processed manually at the Head Quarters and the compilation and tabulation work was to be completed by the end of January, 1986. The survey report "Evaluation study of Quality of Science Education in High Schools" was at the drafting stage at the time of reporting the survey.

OFFICE OF THE REGISTRAR GENERAL OF INDIA, MINISTRY OF HOME AFFAIRS, NEW DELHI

21. Sample Registration System

21.1 This is a continuous survey being conducted by the Registrar General of India, New Delhi. This

was reported in the 36th Report as survey number 19. No major changes were made during the year under reference.

22. Rehbar-I-Sehat Scheme in Jammu & Kashmir—An evaluation

Introduction

22.1 The National Institute of Health and Family Welfare, New Delhi conducted this adhoc survey at the instance of the Union Ministry of Helath and Family Welfare. Funds for the survey were provided by the World Health Organisation. The main objective of the survey was to assess the effectiveness and acceptance of the Rehbar-I-Sehat (RIS) scheme as an alternative to Community Health Guide Scheme. Specific aspects covered in the study were organisation of the scheme, management and logistics including coordination with the education department and relationship of RIS and the health staff at district, block and sub-centre levels; monitoring and control of the scheme; the quality of services provided; and the degree of satisfaction achieved. Broad subject-heads on which information was collected related to management of Rehbar-I-Sehat Scheme, role and performance of RIS, perception of community members/leaders on the scheme. The survey was conducted in the parts of Jammu and Kashmir where RIS scheme was operating.

Sampling Design

22.2 A multistage sampling design was adopted for the conduct of the survey. At the first stage two districts from each of the two regions in Jammu & Kashmir were selected randomly. At the second stage, 2 blocks from each of the two selected districts from Kashmir region and one block from each of the two selected districts in Jammu region, were selected randomly. In each selected block, a sample of 8 Rehbar-I-Sehats was selected randomly from the list of RIS in the block. In selecting RIS from the block, sex of RIS and type of school (primary, middle, high or higher secondary schools) were given due weightage in order to make the sample representative.

From the areas of operation of the selected RIS, four adult community members and one community leader (either formal or informal) were selected. All the officers at the state level and from selected districts having direct concern with the RIS scheme were also interviewed. In addition, all the Block Medical Officers of the selected blocks and some Zonal Medical Officers working at the dispencaries in the blocks of the selected RIS were also interviewed for this study.

Field Work

22.3 The field work was started on 16 September, 1985 and completed on 15 October, 1985 by spending 145 mandays in the field. Data were collected by following field enumeration method through oral information from respondents and by going through official records. The field work was carried out by field investigators recruited on adhoc basis locally with the help of state and district officials. Supervision was done by regular and experienced staff of the Institute. The Officers of the Institute conducted interviews with the officers at the state and district levels and the officials of the Primary Health Centres and collected data on relevant schedules. The field staff including the supervisors were thoroughly trained before their deployment in the field. The field staff were given practical training in the field as well. At the initial stage of the enquiry all the filled-in questionnaires were scrutinized by the supervisors to ensure correctness of data collected. Senior Officers of the Institute also made visits to the fields to ensure better quality of data. Five types of schedules were canvassed for collecting various details of the survey. As a workload norm, every investigator was required to canvass 12-15 schedules per day. It took about 20-25 minutes to fill-in a schedule. In case of non-response substitution was resorted to without disturbing the original samples.

Data Processing

22.4 About 315 schedules were involved in data processing. Four persons each were deployed on scrutiny, editing, coding and tabulation of data. Pre-tabulation processing was completed in 30 mandays— 15 in the field and 15 at the Central office. Tabulation of data was done manually by spending about 14 mandays. With a view to ensuring correctness of tabulated data 100 percent verification was done.

Report and the major Findings

22.5 The survey report entitled "Rehbar-I-Sehat Scheme in J & K State—an Evaluation" was finalised by the end of November, 1985. Among major findings of the survey are : (i) the RIS scheme was not having any role in prevention of diseases and promotion of health programmes, (ii) there was lack of proper and effective coordination between health and education departmens in operation of the scheme, (iii) the personnel in education department were stated to be dissatisfied because the scheme have affected the teachers' performance in the schools, (iv) no proper system existed to monitor or evaluate the scheme at any level, (v) the coordination between the two regions was also ineffective, and (vi) the community was in favour of the scheme but felt that due to administrative and management problems it was not serving as an alternative to the health guide scheme.

.ECONOMIC AND STATISTICAL ORGANISATION, HARYANA, CHANDIGARH

23. Evaluation study of the Sterilization Programme in Haryana

Introduction

23.1 This adhoc survey conducted by Haryana Government aimed at assessing (i) the basis on which the sterilization programme was drawn up; (ii) the physical and financial implementation of the programme; (iii) the motivational procedures adopted including initial screening and selection of acceptors; (iv) the pre-operative arrangements for operations and post-operative facilities provided; and (v) the overall satisfaction of the acceptors and suggesting remedial measures for short-comings observed. The survey was limited to Primary Health Centres in only three districts in the State selected purposively. Pre-survey discussions were held with the doctors and schedules were pre-tested in the field before finally canvassing them for the main survey. The reference period for data collection was the year 1984-85.

Sampling Design

23.2 A combination of purposive and systematic multi-stage sampling design was adopted for the conduct of the survey. For the purpose of sampling the units at various stages, the Districts and Primary Health Centres in the state were arranged in descending order of performance and divided into three strata namely, those (i) with leading performance, (ii) with medium performance and (iii) with the minimum performance. At the first stage, one leading district from each strata was selected purposively. At the second stage, two Primary Health Centres (PHC)—One.

leading and the other medium were selected from each of the sample districts. At the third stage 10 percent of vasectomy cases and 2 percent of laparascopy cases done during the year 1984-85 were selected from each selected PHC. At the fourth stage, 10 non-acceptors and 5 knowledgeable persons per PHC were selected for interview. The total sample size thus elected consisted of 3 districts, 6 PHCs, 156 Laparascopy cases, 45 Vasectomy cases, 60 non-acceptors and 30 knowledgeable persons.

Field Work

23. The field work was started in the month of September, 1985 and completed in October, 1985 by spending 36 mandays. Information was collected through field enumeration method by recording information from respondents and by going through the records of PHCs. Two regular, experienced and full-time Asstt. Research Officers of the Economic and Statistical Organisation were deployed for the field job. They were, however, imparted necessary training before their deployment in the field. Supervision was done by one Deputy Economic and Statistical Adviser and one Research Officer.

Processing of data and Report

23.4 The data collected through a total of 291 schedules were processed, compiled and tabulated manually by three Asstt. Research Officers at the Head Quarters by spending 20 mandays. The Survey report on "Evaluation study of the Sterilization Programme in Haryana" was at the drafting stage at the time of reporting of the survey.

POPULATION CENTRE, BANGALORE

24. Malur Population Survey

Introduction

24.1 This was an ad hoc survey conducted by the Population Research Centre, Bangalore (KARNATAKA) at the instance of the State Government. The main objective of the survey was to estimate the vital rates and proportion of couples practising family planning methods in Malur Taluk of Kolar district in Karnataka where the Family Planning Association of India had earlier undertaken a special programme to promote the health and family welfare activities. The survey was restricted to selected villages in the malur Taluk and the Malur Town. The broad subject heads on which the information was collected related to household particulars, particulars of births and deaths and history of the use of family planning methods by the currently married women. Data were collected with reference to the period beginning 31st August, 1984 to 31st August, 1985. No pilot survey was conducted.

Sampling Design

24.2 A stratified random sampling technique was adopted for the survey. In the rural sector of the Malur Taluk the list of villages according to 1981 Census served as the frame. These villages totalling 295 were divided into 5 strata of population size 1 to 99, 100 to 299, 300 to 499, 500 to 999 and 1000 and above. From each of these five strata a sample of 20 per cent of villages was drawn following systematic random sampling technique. All the households in the selected villages were canvassed for the survey. In the urban sector a sample of houses were selected from each of the wards of the Malur Town following systematic random sampling technique and all the households in the selected houses were covered for collection of various details. The total sample drawn was 438 houses from a total 2190 houses in Malur Town

Field Work

24.3 The field work was conducted during 2 September to 3 November, 1985 by spending about

400 mandays in the field. Field enumeration method was adopted and data was collected by seeking oral information from respondents. The field work was done by six Research Assistants who were regular and experienced. Supervision of the field work was done by one Research Officer of the Centre. The field staff was given one day's training on the various aspects of the field work. Supervision was in the nature of concurrent checks. On an average each investigator was required to conduct 20 interviews a

day. Average time taken per interview was about 15 minutes.

Data Processing and Report

24.4 About 9000 schedules were involved in data processing. 6 persons were deployed each on scrutiny, coding, editing and verification jobs. About 3000 mandays were spent on pre-tabulation processing of data. Tabulation and writing of the Report was yet to be taken up at the time the survey was reported.

DEPARTMENT OF HEALTH SERVICES, KERALA, TRIVANDRUM

25. Operational research for comprehensive study of primary health care.

Introduction

25.1 The Department of Health Services, Kerala conducted this *ad hoc* survey at the instance of the Union Ministry of Health and Family Welfare, New Delhi. The scheme was sponsored by the World Health Organisation. The main objectives of the survey were to (i) identify the problems in the delivery of primary health care at the district level and at the level of Primary Health Centres (PHC) and to find solutions for improving the Primary Health Centre system within the existing resources, (ii) determine the fertility pattern and the morbidity and mortality pattern of principal diseases, (iii) evaluate the flow of information from lower level sto PHC level and then through the district to the State headquarters level and utilisation of such information and (iv) assess the infrastructure facilities for delivery of primary health care. The survey was restricted purposively to selected three districts in Kerala. No pilot survey was conducted prior to the survey. The schedules were, however, pre-tested in the field. The reference period for fertility and mortality pattern was the first nine months period of the years 1983, 1984 and 1985. It was the first nine months period of the year 1985 for morbidity pattern.

Sampling Design

25.2 At the first instance three districts within the State of Kerala were selected purposively, the first being in the advanced stage of development in the matter of delivery of primary health care, the second being comparatively backward where the desired level of development had not been attained and the third being the headquarters district where the level of development had been average. In each distrit, the PHCs were grouped into three strata according to their location in the low-land, mid-land and high-land regions. Within a stratum, PHCs, were arranged in alphabetical order and 5 of them were selected by simple random sampling. Further, from the total number of wards in the panchayat of the selected PHC, 2 wards were selected by simple random sampling. All the households in the selected wards were

covered for the field study to determine the fertility pattern and mortality and morbidity pattern of principal diseases whereas the PHCs were covered for the objetcives of the operational research project. Thus a total of 30 panchayat wards were selected from the selected three districts.

Field Work

25.3 The field work started on 16 October, 1985 and was completed on 16 November, 1985. The relevant data were collected through field enumeration method by personal interviews and visual observations. The field work consisted of two parts viz., (i) household survey where all the households in a ward were covered and (ii) operational research study at the PHC level. In each PHC a team of 8 Investigators under the immediate supervision of 2 Inspectors and one Medical Officer was employed for the field operations (household survey) on *ad hoc* basis in addition to their normal duties. For operational research study in PHCs of each district, a team of 2 Investigators from a consultancy agency was employed for the field work. All these personnel were experienced and were imparted training in carrying out the field work. The supervisors accompanied the Investigators at the time of field study for clarifying doubts and doing a part of the field work independently. The Deputy Medical Officers and Senior Officers carried out post-enumeration checks of the field work.

A total of about 1100 schedules were canvassed for the household survey and about 200 numbers each of the 5 questionnaires for the operational research study at the PHC. The two investigators deployed in a ward were required to interview 8 households in a day for household survey. The two investigators deployed for operational research study were required to cover atleast one PHC a day. It took about 30 minutes to canvass a household schedule whereas 3 hours were spent on the questionnaires for operational research study at a Pimary Health Centre.

Data Processing

25.4 In all about 1100 schedules were involved in data processing. Fight persons each were deployed on scrutiny and editing of data collected and 6 persons

were deployed for coding jobs. The pretabulation processing of data was done for one week in the field and one month at the Central Office. The check lists were verified and corrected. The tabulation errors were rectified by referring to original records. The tabulation of data was done manually as well as with the help of computer.

Report

25.5 The first set of tables was ready by the end of February. 1986 and the final report was expected to be ready by 31 March, 1986. The estimated total cost of the survey was of the order of Rs. One lakh.

DIRECTORATE OF ECONOMICS AND STATISTICS, MADHYA PRADESH, BHOPAL

26. Survey of health workers, their opinion and attitude-policy implication for strengthening Family Planning Programme.

Introduction

26.1 This was an adhoc survey conducted by the Population Research Centre, Directorate of Economics and Statistics, Madhya Pradesh, Bhopal at the instance of Union Ministry of Health and Family Welfare. The objective of the survey was to know the attitude of health workers and 'dais' towards the implementation of Family Planning Programme in the state. The survey was conducted in 10 districts of Madhya Pradesh.

Sampling Design

26.2 A purposive sampling design was adopted for the conduct of the survey. At the first stage, from each of the 10 districts covered, one Primary Health Centre (PHC) having best performance and the other PHC having the worst performance as per the family planning budgets/achievements were selected. From each of the two selected PHCs, 2 male and 2 female Health Supervisors; 3 male and 3 female health workers; 5 village health guides; and 5 trained dais were selected for recording their views on the implementation of family planning programmes. Thus the ultimate sample consisted of 400 health workers for all the 10 districts of the state.

Field Work

26.3 The field work was conducted during April, 1985 by spending about 80 mandays in the field. Field enumeration method was adopted for the conduct of the survey and data were collected through oral information from the respondents and by going through records of the PHCs. Field work was done by 10 Investigators under the supervision of 3 Asstt. Statistical Officers and 2 Asstt. Directors. Data were collected through a single type of schedule used for every health worker in the sample. A total of 400 schedules were canvassed. On an average every Investigator was required to interview 40 health workers. Average time taken to fill-in a schedule was one hour.

Data Processing and Report

26.4 All the 400 schedules canvassed were involved in data processing. Two persons each were deployed on scrutiny, editing and coding of data. About 40 mandays were spent on pre-tabulation processing of data in the field and about 30 mandays were spent at the central office. Data were tabulated manually with the help of calculators by spending about 100 mandays. With a view to reducing procesing and tabulation errors verification to the extent of 10 percent was done.

First set of tables were ready by 31 December, 1985 and the report on the survey was expected to be released by end of March, 1986.

GOKHALE INSTITUTE OF POLITICS AND ECONOMICS, PUNE

27. Follow up survey of Copper-T acceptors in Pune

Introduction

27.1 This adhoc survey was conducted by the Gokhale Institute of Politics and Economics, Pune at the instance of the Central Ministry of Health and Family Welfare, New Delhi. The main objectives of the surveys were to assess the reasons for pick-up of the acceptance of the device; to know the source of knowledge about the device among the masses; to find out the retention rate and the demographic characteristics of the acceptors such as age, parity, number of living children and their age composition and the economic status; and reasons for preference of IUD over other methods. The survey was confined to the Pune city only. No pilot survey was conducted prior to the main survey

Sampling Design

27.2 Two stage sampling design was adopted for the conduct of the survey. The first stage sampling units consisted of Family Welfare Centres and the second stage units comprised acceptors of the Copper-T. Lists of the Family Welfare Centres and the registers maintained by these centres for the acceptors served as frames for the selection of sampling units. From the frame consisting of 22 Family Welfare Centres in the Municipal Corporation area of Pune city four largest centres accounting for nearly half of the total Copper-T insertions were selected purposively. Out of

the remaining 18 centres, another sample of two centres was selected randomly with equal probability without replacement. At the second stage, a sample of Copper-T acceptors was selected using systematic sampling technique. Thus, a total of 1200 acceptors were selected for the conduct of the survey.

Field Work

27.3 The survey was conducted during February—July, 1985. The data were collected through field enumeration method by recording oral information from the respondents. The required information was collected through a single type of schedule by 4 Investigators appointed on adhoc basis for the field job. They were given a week's training in the conduct of field work. The supervision of the field work was exercised by the regular staff of the Institute. On an average, an Investigator was required to conduct 3 to 4 interviews per day. Average time taken to fill-in a schedule was nearly an hour. Non-response of the order of about 50 percent was observed because of incomplete or untraceable addresses of the acceptors, non-resident nature of acceptors etc.

Data Processing

27.4 A total of 512 schedules were involved in data processing. Three persons each were engaged in scrutiny, editing, coding and other operations Data were tabulated with the help of Computer. Further, hundred percent verification was done to ensure accuracy in processing and tabulation of data.

Report

27.5 At the time of reporting, the survey report was under preparation.

28. Health Perception Survey

Introduction

28.1 At the instance of the Central Ministry of Health and Family Welfare, the Gokhale Institute of Politics and Economics, Pune, Maharashtra conducted this adhoc survey. The main objectives of the survey were to (i) assess the level of health consciousness among the rural residents, (ii) assess the level of utilization of existing health services in rural areas and (iii) examine the inter-relationships between level of health consciousness, utilization of health services and availability of health facilities. The survey was conducted in the rural areas of Bhir and Pune districts. A pilot survey was conducted, prior to the main survey, in two villages of Bhor tehsil in Pune district.

Sampling Design

28.2 A stratified two stage sampling design was adopted for the survey. In the state, two districts viz., Pune and Bhir were selected purposively according to the best and worst health facilities available. From each district two tehsils were selected purposively following the aforementioned criterion. The villages in these tehsils were classified into four strata on the basis of the health facilities available in each village. From each stratum two villages were selected systematically. Further, from each selected village forty households were selected systematically.

Field Work

28.3 The field work started in the month of June, 1984 and was completed in October, 1985. The relevant data were collected through field enumeration method by recording oral information from the respondents. Four persons who were the regular staff of the Institute conducted the survey under the supervision of senior members of the Institute. On an average, each field investigator was required to conduct 4 to 5 interviews a day. It took about 1 hour to complete a questionnaire. Only a single type of schedule was canvassed during the survey. The extent of non-response was negligible.

Data Processing

28.4 Data processing was in progress at the time of reporting the survey.

POPULATION RESEARCH CENTRE, DEPTT. OF SOCIOLOGY, PUNJAB UNIVERSITY. CHANDIGARH.

29. A study of incentives and disincentives in Family Planning.

Introduction

29.1 The population Research Centre, Chandigarh conducted this adhoc survey with the main objectives of (i) studying the level of awareness of community members regarding the incentives/disincentives offered under the Family Planning programmes, (ii) studying the attitude of the community towards incentive disincentives, (iii) evaluating the role of incentives/ disincentives as motivator in the acceptance of sterilization, (iv) assessing the possibilty of making incentives more effective to attract the never users, or users of other family planning methods to accept sterilization, (v) to obtain the views of the community

members on the adequacy of incentives and disincentives as motivators and (vi) to study the views of the family planning field workers and officials on the role of incentives and disincentives to the acceptance of sterilization. The whole of Haryana state was covered under survey. The reference period was the years 1982-83 to 1984-85 for acceptors of sterilization and the reference age for non-acceptors currently married couple was 15—44 years. A pilot survey was conducted in Primary Health Centre (PHC) located close to Chandigarh for pre-testing and modification of the main schedules.

Sampling Design

29.2 A multi-stage systematic random sampling design was used for the selection of different units for data collection. At the first instance, all the 12 districts of Haryana State were listed in order of their performance under the family planning programme (sterilization acceptance) during the reference period. On the basis of this ranking, the districts were divided into two groups, namely good and bad performances districts and from each group a sample of 1 district was drawn. At the second stage 2 PHCs were selected at random from each of the two districts. At the third stage 3 medical officers and 4 Health Assistants (including one female) were selected randomly from each PHC. At the fourth stage, list of MPWs was obtained for each selected PHC and 4 teams of MPWs (a team consisting of a male and a female worker) were selected randomly from each PHC. At the fifth stage, corresponding to every team of MPWs, one village was randomly selected from their area of operation. At the final stage a list each of acceptors of sterilization during the reference period and the eligible couples were obtained from the respective PHC officials and a sample of 8 acceptors and 12 non-acceptors was

drawn following random sampling technique. In selecting the acceptors and non-acceptors care was taken to have half of the sample as females as far as possible. In case, however, acceptors in vasectomy cases were not available, the sample was maintained by selecting acceptors of tubectomy. The total sample size thus selected consisted of 2 districts, 4 PHCs, 12 Medical Officers, 16 Health Assistants, 32 MPWs, 128 sterilisation acceptors and 192 eligible couples (non-acceptors).

Field Work

29.3 The field work started on 9 December, 1985 and was completed on 8 January, 1986 by spending about 22 working days in the field. Data were collected through field enumeration method by seeking oral information from respondents and by going through establishments records. Four Research Assistants, including 2 females were deployed on field job. They were regular and full-time employees of the population centre. They were given requisite training before their deployment in the field. The field work was closely supervised by a Research Officer of the Centre by partly staying with the field staff during the field work. Nearly 10 per cent of the schedules were checked by him during the course of data collection. The overall charge of the survey rested with the Senior Research Officer of the Centre. As a workload norm every investigator was required to conduct 5-6 interviews per day. It took about 45 minutes to fill-in a schedule.

Data Processing

29.4 A total of 382 schedules which were canvassed during the course of survey were involved in data processing. The data processing and tabulation was still in progress when the survey was reported.

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30. An evaluation study of Family Welfare Programme in Himachal Pradesh.

Introduction

30.1 The Population Research Centre, Chandigarh conducted this adhoc survey with the main objectives of (i) assessing the accuracy of reported family planning performance, (ii) studying the characteristics of acceptors and non-acceptors, (iii) studying the after-effects of sterilisation operations and I.U.D. insertions and also the extent of follow-up services and (iv) studying the reasons for non-acceptance of family planning methods by non-acceptors. The survey was conducted only in the rural parts of Himachal Pradesh. No pilot survey was conducted. The schedules were, however, designed on the basis of experience gained in similar surveys conducted by the Centre and the guidelines provided by the Union Ministry of Health and Family Welfare. The reference period for collection of data on sterilization and I.U.D. insertions was the years 1981—1984. For

non-acceptors data were collected for eligible couples in the age group of 15—44.

Sampling Design

30.2 A multistage sampling design was adopted for the survey. Districts, Primary Health Centres (PHC), villages and acceptors/non-acceptors were the sampling units at the different stages. The frame for selection of different stages of sampling units consisted of list of districts prepared on the basis of family planning performance and list of Primary Health Centres and village-wise lists of acceptors and non-acceptors of family planning methods. At the first stage, from the list of districts prepared on the basis of family planning performance, Solan district representing an average performance district was selected purposively. At the second stage Dharampur PHC representing an above-average performing PHC and Nalagarh PHC representing a below average performing PHC were selected from Solan district. Since the villages in Himachal Pradesh are scattered

and small in size they were grouped into clusters and 17 such clusters of villages consisting of 66 villages were selected at the third stage following random sampling technique. Within a village all the acceptors of sterilization and IUD insertions falling in the reference period were to be interviewed. In the case of non-acceptors, however, a sample of 20 per cent was to be drawn following systematic random sampling technique. However, the number of acceptors and non-acceptors finally selected was restricted to 300 and 500 respectively, because of time and financial constraints. It was, never-the-less, ensured that equal number of cases were taken for interview from amongst the three categories of acceptors viz., acceptors of sterilization, Tubectomy and I.U.D. Insertions. Similarly in the case of non-acceptors it was ensured that the numbers were equally distributed between male and female.

Field Work

30.3 The field work started on 15 October, 1984 and was completed on 1 March, 1985 by spending 220 mandays. Data were collected through field enumeration method by recording oral information from respondents. Four full-time regular Research Assistants (2 male + 2 female) conducted the field work under the supervision of one Research Officer. The Research Assistants and the Research Officers were well experienced for the job. The Research Officer checked 20 per cent of the filled-in schedules in the field. A total of 767 schedules were canvassed. It took about 1 hour to fill-in a schedule. As a work-load norm, every field investigator was required to conduct 4 to 5 interviews per day. Non-response was negligible.

Data Processing

30.4 All the questionnaires canvassed were involved in data processing. Two persons each were deployed on scrutiny, editing, coding and rechecking of coding jobs. The data were still in pre-tabulation processing stage when the survey was reported. Tabulation of data was to be done on Computer.

THE GANDHIGRAM INSTITUTE OF RURAL HEALTH AND FAMILY WELFARE TRUST, AMBATHURAI, TAMIL NADU

31. Survey for estimation of birth, death and contraceptive prevalence rates in Nilgiris district of Tamil Nadu.

Introduction

31.1 The Gandhigram Institute conducted this *adhoc* survey at the instance of the Union Ministry of Health and Family Welfare with the main objective of estimating birth, death and contraceptive prevalence rates and studying the relationship among these rates. Both rural and urban sectors of Nilgiris district in Tamil Nadu State were covered by the survey. The estimates were required at the district level. The broad subject heads on which the information was collected were total population, births, deaths, uses of contraceptives and maternal care services provided under the family welfare programme. The reference years/periods for population, births and deaths were 1984-85. The reference date for use of contraceptives coincided with the point of survey, while the reference period for maternal services was the pregnancy period falling during the survey period November, 1985 to March, 1986.

Sampling Design

31.2 In both rural and urban areas the sampling conformed to stratified multistage one.

Urban Areas :—All the towns in Nilgiris district were divided into two strata, stratum I consisted of only the district headquarters while stratum II covered the remaining towns of the district From stratum I the district headquarters was covered for the survey whereas from stratum II 3 towns with probability proportional to size (population) were selected. From each town adequate number of census blocks were selected as the second stage units randomly and all the households in each of the selected census blocks were covered for the survey.

Rural Areas :—All the villages in Nilgiris district were divided into two strata where stratum I consisted of villages having Primary Health Centres, sub-centres or any other Government clinic while stratum II covered all the remaining villages in the district. A predetermined sample of 2040 households was allocated between the two strata in proportion to their population size. For selection, all the villages in stratum I were listed in descending order of their population size and divided into two sub-groups approximately of equal population size. The requisite number of villages to be selected from stratum I was determined keeping in view the predetermined number of sample households to be covered from this stratum. Equal number of villages were selected from both the sub-groups of villages with probability preportional to their population size. In the selected villages requisite number of households were selected from 1981 census household list following systematic sampling technique. In case of stratum II also the same procedure was adopted for determining the number of villages, selection of villages and households. However, in this case villages were divided into three sub-groups as against 2 sub-groups in sub-stratum I.

The total number of sample households thus selected and actually surveyed consisted of 1780 households (358 in sub-stratum I and 1422 in sub-stratum II) in the urban sector and 2040 households (1200 households in the sub-stratum I and 840 in sub-stratum II) in the rural sector.

Field Work

31.3 The survey started on 18 November, 1985 and was to be completed on 9 March, 1986 by spending about 820 mandays in the field. The relevant data were collected through field enumeration method by seeking oral information from respondents. The field work was done by 8 Research Investigators appointed on adhoc basis. The field staff consisted of male and female investigators. The female investigators collected data on eligible couples, adoption of contraceptives and other details to be collected from women. Supervision of the field work was done by one Research Investigator who was regular and full time. He was assisted by one Statistical Assistant appointed on adhoc basis for the concurrent checking of collected data. The field staff were given requisite training. A Research Officer also visited the field twice a month to ensure the quality of data collected. Each Investigator was required to canvass 8 schedules a day. It took about 15-20 minutes to fill-in a schedule.

Data Processing

31.4 In all, 20 persons were deployed for processing of data i.e. eight persons on scrutiny of data, two persons on editing and 10 on coding of data. The data were at pre-tabulation processing stage when the survey was reported.

32. Evaluation of Family welfare programme in Tanjore District of Tamil Nadu.

Introduction

32.1 This was an adhoc survey conducted by the Gandhigram Institute at the instance of Population Research Centre, Government of India. The main objectives of the survey were (i) to study the implementation of family welfare programme with respect to knowledge and attitude of the eligible couples, motivational efforts made by the family planning workers and follow-up services provided and (ii) to verify the programme information provided. The survey was restricted to Tanjore district of Tamil Nadu.

Sampling Design

32.2 At the first instance, two Primary Health Centres—one representing high family welfare performance and the other representing low family welfare performance during the last three years—were selected purposively. Apart from this, one Urban Centre was also selected from the district randomly. The two Primary Health Centres and one Urban Centre formed the first stage units. From these centres 600 FW adopters, 600 non-adopters, 20 I.U.D. ever users and 21 peripheral staff were selected following systematic random sampling technique for collecting relevant information.

Field Work

32.3 The field work started on 14th February, 1985 and was completed on 4th June, 1985 by spending about 321 man-days in the field. The data were collected through field enumeration method by seeking oral information from respondents and by going through establishment records. Four full time, regular and experienced investigators were responsible for doing the field work. The supervision of the field work was done by a Research Investigator. The field investigators and the Research Investigator were thoroughly briefed about the various aspects of of the survey. Four types of questionnaires were canvassed for collection of various details. As a work-load norm, every field investigator was required to conduct 8 interviews a day. It took about 45 minutes to fill-in a questionnaire. To meet the non-response a substitute sample was used.

Data Processing and Report

32.4 About 1196 questionnaires were involved in data processing. Two persons each were deployed on scrutiny and editing of data. Six persons were deployed on coding of data. Verification of coding was done by 2 persons. The data were at tabulation stage on computer when the survey was reported. Cent per cent checking was done to ensure accuracy of tabulated data.

UNION TERRITORY OF DADRA AND NAGAR HAVELI, SILVASA

33. Survey to estimate number of houses by type of construction materials.

Introduction

33.1 This was an adhoc survey conducted by the Statistical Wing of the Union Territory of Dadra and Nagar Haveli with the objective of estimating the number of houses by type of construction material used. The whole of the Union Territory was covered in the survey. The estimates were required at Patelad/District/U.T. levels. The broad subject heads on which the information was collected related to number of houses; households; size of household; type of material used for construction of wall, roof and floor; drinking water facilities and mode of light in the dwellings etc. No pilot survey was conducted prior to the main survey. Data were collected in respect of houses existing in January 1985.
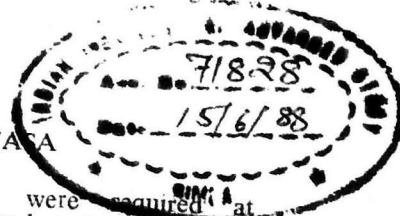
Sampling Design

33.2 A uni-stage stratified simple random sampling technique without replacement was adopted for the survey. Villages in a patelad were used as sampling frame. The basic strata consisted of patelads in the Union Territory. Thus there were 10 strata for the sampling purpose. From each of the 10 strata, a sample of 25 per cent of villages was drawn with the help of random number tables. The total sample consisted of 20 villages. In these selected villages, all houses were enumerated and requisite information on various aspects was collected.

Field Work

33.3 The field work was conducted during January and February, 1985 by spending about 240 mandays. Data were collected by following field enumeration method and recording oral information from respondents. For recording the information on material used for construction of walls, floors and roofs of houses, in addition to oral information from respondents, the investigators were to record their own visual observations. Field job was done by Statistical

Asstts./Investigators deployed on part-time basis. They were, however, imparted a day's training before their deployment in the field. Supervision was done by the Statistical Officer of the Statistical Wing. A single type of schedule was used for collection of data. Each Investigator was allotted 3 villages and was to canvass schedules for all the houses in these villages. Average time taken for filling up of a schedule was approximately 30 minutes.

Data Processing and Report

33.4 A total of 5692 schedules canvassed were involved in data processing. One person each was deployed for scrutiny and editing of data. About 60 mandays were spent, at the central office, on pre-tabulation processing of the data. Data were tabulated manually with the help of electronic calculators by spending about 90 mandays.

The report entitled "Sample Survey for estimation of number of houses by types of construction material, 1985" was expected to be released by June, 1986.

CENTRAL STATISTICAL ORGANISATION, MINISTRY OF PLANNING, NEW DELHI

34. Annual Survey of Industries

34.1 At the instance of the Central Statistical Organisation, Department of Statistics, Ministry of Planning, New Delhi the Field Operations Divisions (FOD) of the NSSO conducted the field work of this annual (continuing) survey. The survey was reported earlier at survey number 28 in the 36th Report of the Sample Surveys of Current Interest in India. During the year 1985, the left-over field work

of ASI 1983-84 was completed and the survey for 1984-85 was taken up. No major changes were made during the year under reference. Data were continued to be collected under ASI relating to capital structure, employment, consumption of fuels and lubricants, raw material and other inputs, output, value added by manufacture, labour statistics and characteristics of factories/establishments to meet the requirements of various users in the Government and non-Government bodies.

DIRECTORATE OF PLANNING, STATISTICS EVALUATION, GOA, DAMAN & DIU, PANAJI

35. An Evaluation study of Khadi and Village Industries Board, Panaji

Introduction

35.1 This was an adhoc survey conducted by the Directorate of Planning, Statistics and Evaluation, Panaji with the main objective of studying the functioning of the Khadi and Village Industries Board and its activities. The survey was confined to Goa district. The broad subject heads on which information was collected in respect of beneficiaries were socio-economic status, assistance extended by the Board, its utilisation and economic benefits accrued etc., which could help in assessing the functioning of the Board and economic impact made by the schemes undertaken by it. The data collected during the survey pertained to 1982-83 to 1983-84.

Sampling Design

35.2 A simple random sampling technique was adopted for the conduct of the survey. The frame for

sampling consisted of list of individual and institutional beneficiaries under 17 schemes of the Khadi and Village Industries Board functioning in 11 Talukas of Panaji District. Individual beneficiaries under the 17 schemes were arranged talukawise and a 50 per cent sample was drawn from each scheme at the taluka level. In case, however, where a single individual beneficiary existed in a particular scheme in a taluka the same was covered. In case of institutional beneficiaries the coverage was hundred per cent. The total sample, thus, constituted 193 individual beneficiaries and 47 institutional beneficiaries.

Field Work

35.3 The field work was started on 21 March, 1985 and completed on 8th April, 1985 by spending 105 mandays. Field enumeration method was adopted for collection of information on various aspects of the survey. Information was collected by recording oral information from respondents and by going through

official records. In all, seven regular Investigators of the Evaluation Wing of the Directorate, properly trained for field job, were deployed for data collection. As a workload norm, each field worker was expected to canvass 2 to 3 schedules per day. On an average, it took about 2 to 3 hours to fill-in one schedule. Supervision of the field work was done by 2 Research Assistants and one Deputy Director. A total of 221 questionnaires consisting of 176 individual beneficiaries and 45 institutional beneficiaries were canvassed. The non-response was of the order of about 8 per cent.

Data Processing and Report

35.4 Data collected through all the 221 questionnaires were processed by 9 persons by spending 45 mandays. Compilation and tabulation of data was done manually with the help of desk calculators in 140 mandays. The report captioned "An Evaluation study on the Goa, Daman and Diu Village Industries Board, Panaji" was prepared.

INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE, NEW DELHI

36. Development of a suitable statistical methodology for estimating extent of labour utilisation in live-stock and poultry keeping in rural areas of Meerut (Uttar Pradesh)

Introduction

36.1 This was an exploratory pilot survey conducted by the Indian Agricultural Statistics Research Institute (IASRI), New Delhi with the following main objectives : (i) comparison of estimates of labour utilisation obtained by different procedures for judging their relative merits, (ii) comparison of cluster of sizes and estimates obtained by post-stratification, and (iii) determination of norms for efficient utilisation of labour. The broad subject heads covered were labour utilisation in live-stock and poultry keeping in rural areas. The rural areas of four tehsils, namely, Baghpat, Mawana, Meerut and Sardhana tehsils of Meerut district in Uttar Pradesh State were covered under the survey. The preliminary enquiry was conducted during the first three months commencing from 1 January, 1985. The detailed enquiry was conducted during the period 1st April, 1985 to 21st March, 1986.

Sampling Design

36.2 A stratified two-stage sampling design with clusters of three villages each as first stage and households as second stage sampling units was adopted for the survey. Each of the four tehsils covered under the survey were treated as strata. In each stratum, 3 key villages were selected randomly and a cluster of 3 villages was formed by clubbing 2 more villages falling within a radius of 8 km. from each of the selected key villages. Complete enumeration of households was then done in each of the clusters for use as sampling frame

for the second stage selection. From the list of households prepared for each cluster, a sample of 20 households—8 keeping bovines and 4 each keeping goats, pigs and poultry respectively was selected by the simple random sampling technique without replacement.

Field Work

36.3 The field work was started on 1st January, 1985 and was completed on 31st March, 1986. About 2070 mandays were spent on the field work. The required data were collected by the method of field enumeration through oral information elicited from the households at an interval of 15 days during survey period. Four field enumerators collected the data under the supervision of a field supervisor. The field staff were regular, full time and experienced. They were imparted necessary training in the field and at the IASRI by the scientist. Surprise concurrent enumeration checks were also carried out by the scientist and field officer. Six different types of schedules were canvassed during the survey. Average time taken in filling a schedule was 45 to 75 minutes. As a workload norm, 5 interviews were conducted by each field worker in a day.

Data Processing

36.4 The data collected were processed by two persons deployed one each for scrutiny and coding work. The tabulation of data was not undertaken at the time of reporting the survey. It would be done manually as also by employing electronic method. The total estimated cost of the survey was Rs. 2.65 lakhs.

LABOUR COMMISSIONER, PUNJAB, CHANDIGARH

37. Survey regarding working and living conditions of agricultural labourers in Jalandhar and Bhatinda.

Introduction

37.1 This was an adhoc survey conducted by the Labour Commissioner, Punjab, Chandigarh with the

object of studying the working and living conditions of agricultural labourers in Jalandhar and Bhatinda districts of the state. The broad subject heads relating to which the information was collected were identification of the labourer, details of income of the household from various sources, expenditure incurred by the household, housing conditions, household assets, indedtedness of the household and working conditions. The schedule for the survey was pretested through a pilot study conducted prior to the main survey. The reference period for collection of data was the preceding year except for household assets and indebtedness for which information was collected as on the date of the survey.

Sampling Design

37.2 A stratified two stage random sampling design was used for the conduct of the survey. Blocks in the two districts formed the strata. From each block a sample of 5 villages was selected and from each village thus selected a sample of 4 agricultural labour households was selected. The total sample size, thus selected, consisted of 60 villages and 240 households in Jalandhar district and 45 villages and 180 households in Bhatinda district.

Field Work

37.3 The field work was started in the second week of April, 1985 and completed in the first week of May, 1985. The required data were collected by seeking oral information from respondents. A total of 12 Labour Inspectors of the Department conducted the field work under the supervision of one Scrutiny Inspector. Only one type of questionnaire was canvassed for collecting various types of information. As a work-load norm, every Inspector was expected to canvass 4 questionnaires per day. On an average, one day was spent for one village. The total number of questionnaires canvassed was 420.

Data Processing

37.4 The data collected through all the 420 questionnaires were processed and tabulated manually by using facit calculators. This job was assigned to twelve labour inspectors and one scrutiny inspector.

Report

37.5 The report entitled "Survey regarding working and living conditions of Agricultural Labourers in Jalandhar and Bhatinda districts" was prepared and was under approval of the State Government at the time of reporting the survey.

CENTRAL STATISTICAL ORGANISATION, MINISTRY OF PLANNING, NEW DELHI

38. Project on internal migration in India

38.1 The Project sponsored by the International Labour Organisation was initiated by Central Statistical Organisation, Department of Statistics, Government of India, New Delhi in August 1984 in the form of three case studies one each in Bihar, Kerala and Uttar Pradesh. The field work was done by A. N. Sinha Institute of Social Studies, Patna (Bihar),

Kerala Statistical Institute, Trivandrum (Kerala) and the Operations Research Group (ORG), Baroda for Uttar Pradesh. The field work in respect of the three studies was completed by February, 1985. The data processing and tabulation work has also been completed and the report is to be ready by January, 1987. Technical details etc. of the survey were reported in the 36th Report of the "Sample Surveys of Current Interest in India" at Survey No. 35.

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, NEW DELHI

39. Concurrent evaluation of integrated rural development programme beneficiaries

Introduction

39.1 This was an ad hoc survey conducted at the instance of the Ministry of Agriculture and Rural Development, Government of India by different institutions in the country. The main objectives of the survey were to assess the impact of the programmes, to ensure that the benefits of the programme reach the poor and to streamline and improve the implementation of the programme. The whole of the country was covered under the survey with provision to yield estimates at State level. The broad subject heads in respect of which the information was collected were identification and selection of beneficiaries provision of assets,

details of benefits received, details of loans, maintenance of assets, insurance of assets, training of beneficiaries, linkages and after care and income from assets. No pilot survey was conducted prior to this survey. The reference period for current beneficiaries was three months period preceding the month of survey while for old beneficiaries it was two years before the year of survey.

Sampling Design

39.2 A statified four stage sampling design was adopted for the conduct of the survey with simple random sampling at the first and second stages, purposive sampling at the third stage and circular systematic sampling at the fourth stage. The frames for the various stages of sample units were based on the

list of statewise districts, list of district-wise blocks and records of beneficiaries maintained at the block offices and banks. Districts, blocks, villages and beneficiaries were the first, second, third and fourth stage sampling units respectively.

For purposes of stratification, the country was divided into 18 zones constituting geographically continguous districts. In each zone one district was selected randomly without replacement every month on a rotation basis so that all the districts in the country were covered in one year. At the second stage from each of the selected districts, two blocks were selected every month using simple random sampling technique. From each of the selected blocks, four villages were selected, two each for studying new and old beneficiaries. From the villages where at least five new beneficiaries were there, the village having maximum number of beneficiaries was selected purposively. The second village, from among the aforementioned villages, geographically closest to the first one was selected to form a cluster of two villages. An exactly similar procedure was adopted for selection of two villages for the study of old beneficiaries.

From each village selected as a third stage unit, five beneficiaries were selected circular systematically. In case in a village the beneficiaries were less than 10, any 5 of them whose names appeared sequentially were selected. The total sample size constituted of 40 beneficiaries in a districts—20 new beneficiaries and 20 old beneficiaries.

Field Work

39.3 The field work was initiated in October, 1985 and was expected to be completed by September, 1986. The data were collected through field enumeration method by recording oral information from respondents and by consulting the records of the blocks and banks concerned. At the time of reporting the field work of the survey was in progress. For the purpose of the survey only one type of schedule was being canvassed. As a workload norm, an investigator was expected to canvass ten schedules per day.

Report

39.4 The survey scheme envisaged bringing out results on monthly, quarterly, half yearly and annual basis. Motnhly reports beginning from October 1985 to June 1986; quarterly reports for October 1985—December 1985; and half yearly report for October 1985—March 1986 were brought out upto the date of reporting the survey. On the basis of these reports, corrective measures were being taken up regularly with State Governments/implementating agercies to streamline the implementation of the programme. The final report would be brought out after the completion of the survey.

The cost of the survey was estimated at Rs. 12.96 lakhs approximately.

LABOUR BUREAU, MINISTRY OF LABOUR, SHIMLA

40. Socio-economic conditions of women workers in bricks, tiles radio and television, pens and ball point pens, stone crushing and stone dressing, electric lamps and tobacco industries.

Introduction

40.1 The study was a part of the scheme captioned 'Socio-economic conditions of women workers in organised industries', taken up by the Labour Bureau as a part of its research programme. It covered bricks, tiles, radio & television, pens and ball point pens, stone crushing and stone dressing, electric lamps and tobacco industries. The main objective of this study was to collect socio-economic data on women workers in the aforementioned industries with a view to studying their working and living conditions and the extent to which the welfare amenities were actually available to them vis-a-vis the existing protective labour legislative provisions concerning them. All the states where such factories were located were covered under the study. However, states/UTs where the total number of sampled factories selected for study happened to be less than five were not covered for the study. Thus, finally the study was confined to Andhra Pradesh, Bihar, Gujarat, Kerala, Karnataka, Maha-

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rashtra, Uttar Pradesh and West Bengal states and union territory of Delhi. The relevant data were collected through two sets of schedules viz, unit level and worker level schedules. Broad subject heads on which data were collected through unit level schedules related to occupation-wise information, trend of women employment during the last five years, recruitment and labour wastages, age, marital status, employment status, length of service, wage rates and earnings, absenteeism, expenditure on the provisions of separate welfare mesaures for women, working conditions, welfare amenities and trade unionism. In addition, views/ observations of the employers were also recorded in the matter of recruitment, promotion, comparative efficiency of men and women and effect of protective legislative provisions on the employment of women. The various subjects on which data were collected through worker-level schedule related to age, marital status, educational qualifications, native place, other personal particulars of women workers, their working and living conditions, welfare amenities actually available to them, trade unionism and the difficulties, if any, faced by them. In addition to this household data on items like demographic and occupational pattern of other members usually residing with the sampled women worker, total family income from all

sources, housing conditions etc. were also collected through the worker-level questionnaire. The information was also collected on difficulties faced in employing women workers and means for overcoming these difficulties through a separate 'Zero' questionnaire from some additional factories not employing women workers but falling in the industry group covered for the present study. A pilot study was conducted in 1980 to test the schedules and define the limits and scope of data sought to be collected during the survey. Different reference periods were adopted for collecting information on different items. Thus for employment data, length of service and employment status the last working day of the year, 1984 was taken as the reference date. In respect of recruitment and labour wastages the calendar year, 1984 was treated as the refernce period. The last pay period falling in the month of December, 1984 was taken as reference period for the wage rates and earnings. The date of visit coincided with the reference date for recording information on age, marital status, working conditions, welfare amenities etc. Information on absenteeism was recorded for the calendar year 1984. For collection of information on total wage bill and expenditure exclusively on women workers, the latest year for which the accounts of the sampled factory were available was treated as the reference period.

Sampling Design

40.2 The factories under each industry group were divided into two strata i.e., one having low percentage and other having high percentage of women workers, the cut-off point being the overall percentage of women workers in that industry group at all India level. In each industry group the factories were arranged in the ascending order of employment and a sample was drawn systematically. In case the number of factories in a particular industry group was less than 50 the sample was drawn circular systematically. All the women workers in the sampled factory were arranged occupation-wise and a sample was drawn by using circular systematic sampling. The total sample size to be covered was distributed over various occupations in proportion to total number of workers in each occupation.

Industry-wise lists of factories not employing women pertaining to areas covered under the study were prepared in consultation with the State Labour Departments during the course of the study and a sample of factories was drawn circular systematically. For canvassing 'Zero' questionnaire, the sample size was about 20 per cent of the sample size drawn for other purposes i.e. for canvassing unit questionnaire

The sampling fractions used for determining the total sample sizes of factories for 'Unit level Questionnaire' for various industry groups varied according to the all India total number of factories under these industry groups featuring in the sampling frame. Thus the sampling fraction for the industry groups having upto 100 factories in all India frame was fixed as 15 per cent, whereas for industries having a total number of factories ranging from 101 to 250 and

251 and above it was fixed as 10 and 8 per cent respectively. The actual sample size for each individual minor group industry was calculated by multiplying the total number of units in the frame with the corresponding sampling fraction and rounding the resultant figure to the nearest integer. In the case of women workers the sampling faction was 15 per cent subject to a minimum of 3 women workers in sampled factory employing less than 25 women workers; 12 per cent subject to a minimum of 5 women workers in sampled factory employing 26—49 women workers, 9 per cent subject to a minimum of 5 women workers in sampled factory employing 50—99 women workers and 5, 3, and 2 per cent respectively for sampled factories employing 100—249, 250—499 and 500 and above women workers.

The total sample size thus selected for various industry groups under the present phase of the study consisted of 138 factories for unit-level questionnaires, 626 women workers for worker level questionnaires and 21 factories not employing women workers for "Zero" questionnaires.

Field Work

40.3 The field work was carried out during first week of January to first week of April, 1985 by spending 850 mandays. The relevant data were collected through field enumeration by recording oral information from women workers/management of the units and by going through establishment records. The field work was carried out by 8 full time regular Investigators Grade-II under the supervision of 2 Investigators Grade-I of the Labour Bureau. They were imparted thorough training in the various aspects of the field work before visiting the field. They were also imparted practical training in the field. Supervision to the extent of one-third of the sampled units was done by the supervisory staff. They were also required to do complete scrutiny of the filled-in questionnaires in the field itself. Further, for monitoring, both the field workers and supervisors were required to submit weekly progress reports in respect of work done by them to the headquaters. The Asstt. Director incharge of the study also made spot checking of the data collected during the course of study. As a workload norm, a field investigator was required to canvass a 'unit level questionnaire', alongwith the 'worker level questionnaires' of that particular unit in about 2 days. On an average, he was required to interview 5 to 10 women workers of the sampled unit for canvassing "worker level questionnaires" within the specified period of 2 days. It took about half a day to canvass a "Zero questionnaire" for the factory not employing women workers. Substitution was resorted to in case sampled factory was found closed or changed the line of production or had women employed less than ten.

Data Processing

40.4 A total of 138 unit level questionnaires, 626 worker level questionnaires and 21 'Zero' questionnaires were involved in data processing. In all 8 Investigators Grade-II and 2 Investigators Grade-I were employed for scrutiny, posting of data, checking and

preparation of tables. The tabulation of data was done manually with the help of facit and electronic calculators within a period of 1050 mandays. With a view to ensuring accuracy complete checking of data tabulated was done.

Report

40.5 At the time of reporting, the final tables were ready. The work relating to the drafting of the report was in progress. The estimated total cost of the surveys was Rs. 4.00 lakhs.

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41. Working and living conditions of labour belonging to scheduled castes employed in sweeping and scavenging, tanning and flaying, shoe making and bone crushing at Patna.

Introduction

41.1 This adhoc survey was conducted in Patna by Labour Bureau, Ministry of Labour, Shimla with the object of collecting comprehensive data on important socio-economic characteristics of scheduled caste workers employed in sweeping and scavenging, tanning and flaying, shoe-making and bone crushing occupations which would be helpful in formulating realistic programmes and policies for amiliorating their conditions. The survey would also serve as a bench mark for conducting similar repetitive studies.

The broad subject heads in respect of which information was collected during the survey were (a) employment, wage rates and earnings, working conditions, welfare amenities, social security, social status of the job, occupational mobility etc.; (b) living conditions such as family and family income characteristics, qualitative standard of living and dietary habits, assets and indebtedness, housing conditions, extent of untouchability, forced labour, awareness of welfare programmes, migration, change of religion etc., and (c) specific information having a direct bearing on the living conditions in localities predominantly inhabited by scheduled caste workers such as location and occupation of the inhabitants, environment and surroundings, type of houses, conditions of roads, lanes, drains and public latrines, street lighting, drinking water supply, transport and availability of civic, social, cultural, educational and other amenities|services. The main survey was preceded by a pilot survey conducted at Agra in 1976-77. The schedules etc. for the main survey were finalised on the basis of the pilot survey.

Sampling Design

41.2 The sampling frame was not readily available and had to be prepared in consultation with various agencies such as Inspector of factories, Inspector of Shops and Commercial Establishments, Municipal Corporation, Zilla Parishad etc. and owners of establishments. A stratified two stage sampling design was used in the survey with establishments as first stage units and scheduled caste workers as second stage units. The establishment|factories were divided into four strata on the basis of occupations. Decision about sample size was taken keeping in view the available resources and distribution of population in different strata. The first stage units were selected with probability proportional to size while the second stage units were selected by systematic random sampling. In all, 51 first stage units and 267 second stage units were covered during the survey. There were 64 cases of non-response and substitutes were taken in 48 of these cases.

Field Work

41.3 The field work commenced on 2 July, 1985 and was completed on 12 August, 1985. In all 336 mandays were spent on field work. Information was collected through oral enquiry from workers, employers' records, interviews of responsible persons of the locality, officials of the Municipal Corporation as also observations by the field staff. The field work was carried out by a team of 6 Investigators Grade II. Their work was supervised by two Investigators Grade I. An assistant Director made on the spot checking of the field work and gave necessary instructions and guidance to the field staff. The entire team consisted of full time employees of the Labour Bureau and was imparted necessary theoretical training at the headquarters and practical training in the field before being engaged in the survey work. Apart from the listing schedule, four different schedules were used, one each for oral information on living conditions from the worker, collecting information on working conditions from employer's record, collecting information on working conditions orally from the worker as also from employer's record and collecting oral information from responsible persons etc. The average time taken for canvassing was one day each for three of the schedules and 1 to 8 days, depending on the size of the establishment|factory, for the fourth schedule. In all 369 questionnaires were canvassed during the survey.

Data Processing

41.4 All the canvassed schedules were involved in data processing which was being done manually by two persons. About 84 mandays and 300 mandays were spent in the field and the Central Office respectively on pre-tabulation processing. At the time of reporting, the tabulation work was at advanced stage.

Report

41.5 The report was likely to be finalised by 31 March, 1986. The estimated total cost of the survey was approximately Rs. 3 lakhs.

DIRECTORATE OF PLANNING, STATISTICS AND EVALUATION, GOA, DAMAN AND DIU, PANAJI.

42. An evaluation study on drinking water supply schemes in rural areas of Goa district.

Introduction

42.1 At the instance of Evaluation Advisory Board of the Union Territory this adhoc survey was conducted by the Directorate of Planning, Statistics and Evaluation, Panaji with the main objective of assessing the impact of the various drinking water supply schemes implemented by the Government in the rural areas of Goa district to find out the nature and extent of benefits derived from these schemes by the rural population, their attitude towards safe drinking water provided and to solicit their suggestions for improvement in these schemes. The various items on which information was collected broadly related to general information about households selected, conditions of water supply before and after the introduction of drinking water supply schemes, impact of these schemes and suggestions from the households for improving these schemes.

Sampling Design

42.2 A stratified multistage sampling design was adopted for the survey. The talukas of Goa district formed the strata. In each taluka the villages were divided into two categories i.e. 'problem villages' and 'non-problem villages'. From the problem villages 25 percent of villages were selected randomly while from the non-problem villages 10 percent of villages were selected randomly. Thus out of 170 problem villages, a sample of 45 villages and out of 116 non-problem villages a sample of 15 villages was selected for the purpose of survey. From each selected village five percent households were selected randomly as the second stage units. In all 1000 households were selected for canvassing the schedule.

Field Work

42.3 The field work was started on 21 August, 1985 and completed on 23 December, 1985 by spending 203 mandays. The relevant information was collected by seeking oral information from respondents and by going through establishment records. In all, five full time experienced Statistical Assistants were deployed for field work who were fully trained for the job. Supervision was exercised by one Research Assistant to the extent of 5 percent of the selected villages. As a workload norm, every Statistical Assistant was required to canvass 5 to 7 household schedules per day. On an average, a Village Panchayat Schedule was canvassed in 10 minutes while the Household Schedule was canvassed in 30 minutes. During the survey, 60 village panchayat schedules and 100 household schedules were canvassed. In case of non-response owing to permanent closure of a selected house or death or migration of the constituent (s) of the house, substitute household from the reserved list was used.

Data Processing

42.4 For scrutiny and coding of data, 7 persons were engaged. For other operations including tabulation interpretation and drafting of the report six persons were employed. Tabulation was done manually by using electronic calculators within a period of 30 mandays. The first sets of table would be ready by the end of January, 1986.

Report

42.5 The report was under preparation at the time of reporting the survey.

ECONOMIC AND STATISTICAL ORGANISATION, HARYANA, CHANDIGARH.

43. Evaluation study of Integrated Rural Development Programme in Haryana.

Introduction

43.1 The Economic and Statistical Organisation, Haryana conducted this adhoc survey with the main objectives of (i) examining the procedure adopted for identification of beneficiaries under the Integrated Rural Development Programme (IRDP), (ii) finding out the nature and extent of assistance provided to the beneficiaries, (iii) studying the impact of assistance given under the programme on the household economy of the beneficiaries and (iv) determining the bottlenecks and shortcomings in the contents and execution of the programme. The survey was conducted in four districts of the state namely, Kurukshetra, Faridabad, Hissar and Mahendragarh. The broad subject heads on which the information was collected were (a) agriculture benefit schemes, (b) irrigation schemes, (c) animal husbandry sector schemes, (d) transport sector schemes, (e) small business shop schemes and (f) small scale industries sector schemes. Reference period for beneficiaries under the various IRDP schemes was the year 1982-83 whereas it was the period 1981-82 to 1983-84 for secondary data under District Rural Development Agencies (DRDA). In respect of opinions of the beneficiaries and of views of the bankers who provided finance under the various scheme, the date of survey was treated as the reference period.

Sampling Design

43.2 A multistage sampling technique was adopted for the survey. At the first stage four districts viz. Kurukshetra, Faridabad, Hissar and Mahendragarh were selected purposively with a view to giving re-

gional representation of the state. At the second stage, 2 blocks from each of the four districts were selected purposively one each representing maximum number of beneficiaries and the other minimum number of beneficiaries. At the third stage 125 beneficiaries under the credit linked schemes were selected following systematic random sampling technique, from each of the two selected blocks from as many villages of the block as could provide them. The total sample size from the blocks thus selected was 1006 IRDP beneficiaries under credit linked scheme falling in 43 villages. For the secondary data collection from each of the 43 villages, all the available beneficiaries who were trained under the Craftsmen Training Schemes and TRYSEM Schemes during 1982-83 were considered for the survey. A total of 50 beneficiaries under Craftsmen Training Schemes and 8 under TRYSEM schemes were thus covered for survey. In addition to this the bank branches which covered the villages under the IRDP were also contacted for their views about the programmes.

Field Work

43.3 The field work was started in December, 1984 and completed in April, 1985 by spending about 240 mandays. Data were collected through field enumeration method by personal interviews and by going through the records maintained by DRDAs, the Director, Special Projects, Haryana, Chandigarh and the Banks. Field work was done by 3 Assistant Research Officers and 1 Statistical Asstt. under the supervision of 1 Research Officer. These were regular and experienced staff of the Economic and Statistical Organisation. They were, however, imparted requisite training before their deployment in the field. Four types of questionnaires were canvassed one each for DRDA, beneficiary under the credit linked schemes, trainee under the Craftsman Training Schemes|TRYSEM schemes and the bank branches. The total number of schedules thus canvassed were 4 DRDA schedules, 1006 beneficary schedules, 58 trainees scheduls and 35 banks schedules.

Data Processing and Report

43.4 All the schedules canvassed were involved in data processing. One Asstt. Research Officer, one Statistical Asstt. and one Computor each were deployed on scrutiny, editing and coding of data. Compilation and tabulation of the data was done by three persons manually with the help of calculators and completed within a period of 200 mandays. The report was yet to be finalised at the time of the reporting the survey.

DEPARTMENT OF PLANNING, HIMACHAL PRADESH, SHIMLA

44. An evaluation study of Bio-gas plants in Himachal Pradesh.

Introduction

44.1 This survey was in the nature of a pilot study carried out by the Deptt. of Planning, Himachal Pradesh, Shimla. The objectives of the study were (i) to make a general assessment of the working of the bio-gas plants in Himachal Pradesh and to find out whether the beneficiaries were satisfied with the working; (ii) to work out the economy of bio-gas plants over the traditional types of fuel used by the beneficiaries prior to installation of bio-gas plants by finding out the daily hours of gas generation and its cost equivalent to the traditional fuel and to work out a qualitative estimate of fuel saving; (iii) to estimate the savings in the traditional types of fuel after the installation of bio-gas plants; (iv) to estimate the savings of manpower in the collection and use of traditional fuel like firewood, coal and kerosene oil and; (v) to make a qualitative study of other benefits related with the installation and use of bio-gas plants such as its use for heating and lighting etc. and its impact on domestic and village environment. The broad subject heads on which information was collected related to (i) progress of bio-gas installation in the State, (ii) expenditure incurred, (iii) socio-economic structure of the selected households, (iv) size of plant, (v) cost of subsidy, (vi) number of livestock possessed by the households, (vii) quantity and value of dung used for

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bio-gas plants, (viii) qauntity of gas generated, (ix) quantity and value of alternative fuel used, (x) annual quantity and value of fuels used prior to the installation of bio-gas plants, (xi) man-hours spent on collection and use of firewood, (xii) savings effected after the installation of bio-gas plants. The study was conducted in only four districts of the state namely, Mandi, Solan, Hamirpur and Una. Reference period for collection of information was 1982-83 to 1984-85.

Sampling Design

44.2 The sampling frame consisted of the bio-gas plants installed during 1982-83 A stratified random sampling technique was adopted. In the first instance the four districts mentioned in earlier paragraph were selected purposively because out of 590 bio-gas plants installed during 1982-83 in the state 425 were located in these districts Each of the four districts was treated as a separate stratum for sampling of the bio-gas plants. A sample of 5 percent of the plants was selected following a systematic random sampling technique. Thus a total of 22 sample (beneficiary households) were selected for study out of a total of 425 plants.

Field Work

44.3 The field work started on 12 January, 1984 and was completed on 2 February, 1984 by spending about 30 mandays Field enumeration was adopted

for the conduct of the survey and data were recorded by seeking oral information from respondents. Data were collected by two Technical Assistants who were regular employees of the Department of Animal Husbandry having experience in this type of work and no special training was imparted before the survey. No supervision of the field work was done. Data was collected through a single type of questionnaire. Each field investigator was allotted equal number of beneficiary households for collection of various types of information. On an average it took about one hour to complete a schedule.

Data Processing and Report

44.4 Data collected through 22 beneficiary households schedules were processed by one Research Officer. Tabulation of the data was done by one Technical Asstt. manually with the help of calculators. A total of 60 mandays were spent on tabulation. A report on the study entitled "Bio-gas plants in Himachal Pradesh—An Evaluation study" was published in September, 1985. The approximate cost of the study was of the order of Rs. 16.5 thousand.

DIRECTORATE OF ECONOMICS AND STATISTICS, MAHARASHTRA, BOMBAY

45. An evaluation study of Bio-gas plants in Maharashtra.

Introduction

45.1 The Directorate of Economics and Statistics, Maharashtra, Bombay conducted this adhoc survey with the main objective of assessing the progress made in the installation of bio-gas plants in the state, present position of the gas plants established and savings effected in consumption of fuel. The whole state of Maharashtra was covered for the study. The estimates were required at revenue division level. The broad subject heads on which the information was collected related to socio-economic background of the beneficiaries, details of plants set up, live stock inventory, status of the gas plants and savings in fuel due to utilisation of gas plants. Reference period for collection of data was the years 1982-83 to 1984-85.

Sampling Design

45.2 The sampling frame consisted of village-wise list of beneficiaries maintained by the Block Development Officers. Blocks and the villages in a district served as first and second stage sampling units. In the first instance, 3 blocks were selected at random from each district in the State with probability proportional to size. At the second stage 5 villages were selected from each of the blocks following linear systematic sampling technique. In the selected villages, all the beneficiary households who set up bio-gas plants during the reference period with the help of Government subsidy were contacted for collection of requisite details for the survey. The total sample size consisted of 87 blocks and 2503 beneficiary households.

Field Work

45.3 The field work was started on 1st November, 1985 and completed on 31st December, 1985. Data was collected by following field enumeration method by seeking oral information from respondents and by

going through records maintained at Block Offices. Field work was conducted by regular staff of the Directorate posted at divisional level under the supervision of the senior officers of the Directorate. Data was collected through a single type of schedule. The total number of schedules canvassed was 2503.

Data Processing

45.4 All the 2503 schedules were processed by 1 Research Officer, 2 Research Assistants and 1 Statistical Assistant. About 60 mandays were spent on pre-tabulation processing of data. Data were tabulated manually. With a view to ensuring accuracy in tabulation of data inter-consistency checks were made.

Report

45.5 The draft report on the survey was expected to be ready by February, 1986. Among the major findings of the survey were the following : Two third of the plants surveyed were in working condition ; another thirteen per cent were just completed but not covered. Percentage beneficiaries belonging to SC/ST categories has appreciated from a very low level to 13 per cent during the reference period. Eighty-five per cent of beneficiaries had agriculture as their main occupation and reported that the expenditure incurred by them for setting up the plants was more than the prescribed limit. Majority of the beneficiaries were reported to have stopped using dung cake as fuel. About 1/4th of the beneficiaries using firewood earlier reported 100 per cent saving therein while another 30 per cent of beneficiaries reported a saving of 75 per cent or more. Most of the beneficiaries reported that they had no difficulty in regard to availability of dung.

46. Evaluation study of block level village Artisans' Multipurpose Cooperative Societies

Introduction

46.1 The Directorate of Economics and Statistics, Maharashtra, Bombay conducted this ad hoc survey with the main objectives of (i) assessing the working of block level village artisans' multipurpose cooperative societies in relation to the objectives of the societies, (ii) studying how far the cash credits granted were utilized by the artisans and the quantum of loan outstanding with thse arisans, (iii) studying the problems and reactions of the artisan members of the scheme and its implementing agencies and (iv) suggesting steps for effective implementation of the scheme. The entire state was covered under the survey programme. Reference period was the financial year 1981-82.

Sampling Design

46.2 A stratified multistage sampling technique was adopted for the survey with districts, blocks, villages and beneficiaries as sample units in the successive stages. The frame for the selection of these units consisted of district-wise and village-wise Balutedar Co-operative Societies, number of members of the societies and the number of members to whom cash credits were sanctioned during financial year 1981-82 along with the amounts sanctioned. These lists were obtained from the Maharashtra State Khadi & Village Industries Board, Bombay. Making use of these lists the two following cirteria were adopted for selection of the districts.

(a) the percentage of artisan members of societies in the district to the total rural population plus population of 'C' class and non-municipal towns, and

(b) the percentage of artisan members of societies who have been given cash credit to the total artisan members of the societies.

Considering the above cirteria, percentages were worked out for each district and each revenue region in the whole state. Each district in the region was assigned character 'A' if its percentage as per (a) above the average regional level and 'A' if the percentage happened to be below it. Similarly each district was assigned character 'B' or 'B' on the basis of criterion (b) above, taking into consideration the average percentage of the region. Taking into account characterisation of districts as above, the districts were divided into 4 strata namely AB, AB, AB and AB.

Thus the district under AB belonged to above average category and AB belonged to below average category in respect of both the characteristics. From each region two districts—one with character AB and one with character AB were selected. However, in the regions where there were no districts belonging to these two groups i.e. AB or AB, the districts were selected taking into consideration the percentage of members with cash credits to the total rural population plus population of 'C' class and non-municipal towns; under this procedure, the district with highest percentage and the one with lowest percentage were selected. This procedure was also followed if the number of districts in a region under character AB and AB was more than one, taking AB for highest percentage and AB for lowest percentage. For selection of blocks in the selected districts, again the percentage of cash credits members to the total rural population plus population of 'C' class and non-municipal towns was worked out at the block level and one block with highest percentage and the other block with lowest percentage were selected. For selection of the last stage sample unit i.e. the beneficiary, a list of artisan members granted cash credit by D.C.C. Banks, along with their industry was prepared for all the selected societies. These members were arranged according to their industry and 10 artisan members were selected from each of the 143 selected villages following circular systematic sampling procedure. The total sample size thus selected consisted of 12 districts, 24 blocks, 143 villages and 1193 beneficiaries.

Field Work

46.3 The field work started in September, 1983 and was completed in the month of October, 1983. Data were collected through field enumeration method by seeking oral information from respondents and by going through official records. The field work and its supervision was done by regular staff of the Directorate. A total of 1193 beneficiary schedules, 09 schedules for DCC Banks and 12 schedules for Directorate of Khadi and Village Industries offices were canvassed.

Data Processing and Report

46.4 All the schedules canvassed were processed by 1 Research Officer, 2 Research Assistants and 1 Statistical Assistant in a period of 60 mandays. Tabulation of data was done manually. With a view to ensuring accuracy, inter-consistency checks were made. The results of the survey were not yet published at the time of reporting the survey.

ECONOMIC AND STATISTICAL ORGANISATION, PUNJAB, CHANDIGARH.

47. Impact of loans/subsidies to weaker sections of society in Punjab.

Introduction

47.1 This adhoc survey was conducted by the Economic and Statistical Organisation, Punjab at

the instance of Department of Social Welfare in the state. The main objective of the survey was to assess the extent to which the progress has enabled the weaker section of the society to cross the poverty line. The suvey covered the whole state. The broad subject heads on which information was collected related to particulars of beneficiaries such as name,

occupation—primary and secondary, details of family members and their activities, income of the family, details of loan taken such as name of the bank advancing loan, amount of loan, rate of interest, diversion of loan, household debt and purpose for which the loan was taken and other characteristics which would reveal the impact of loan. Reference period for collection of data was one year prior to taking the loan and any year for yellow card holders. No pilot study was conducted prior to main survey.

Sampling Design

47.2 A two stage random sampling design was adopted, the villages/urban wards and beneficiary households being the first and second stage units respectively. At the first instance, all the villages and urban wards were arranged in ascending order of population and a sample of 3 percent was drawn. Thus, a sample of 366 villages and 100 urban wards was selected at the first stage. At the second stage, from a total of 6652 beneficiaries in the selected villages and urban blocks a sample of 3519 beneficiaries was drawn.

Feld Work

47.3 The field work was commenced in July, 1985 and completed in October, 1985. The relevant information was collected by interviewing the informants. The field work was carried out by a team of 118 Field Assistants who constituted regular staff of the Organisation stationed at district and block headquarters. They were imparted necessary training for carrying out the field jobs. The supervision was done by 12 Statistical Assistants, 12 Technical Assistants, 3 Research Officers, 4 Technical Assistants and Director. The data were collected through a set of seven questionaires. No workload norm was fixed for the field workers. During the survey no non-response was reported.

Data Processing

47.4 The scrutiny of filled-in questionnaires was done by the district level supervisory staff. The tabluation of data collected was being done manually at the time of reporting the survey.

NATIONAL SAMPLE SURVEY ORGANISATION, NEW DELHI

48. Survey on wholesale and retail trade—NSS 41st round.

Introduction

48.1 During 41st round survey (July, 1985—June, 1986), the NSSO was engaged in collection of data on wholesale and retail trade. Trading establishments employing a maximum of 5 workers including one or more hired workers called non-Directory Trading Establishments (NDTE) as also those enterprises run without any hired worker termed as Own Account Trading Enterprise (OATE) were covered. The bigger establishments employing 6 or more workers designated as Directory Trading Establishments (DTE) were being covered in a separate survey. The 41st round survey covered the whole of the Indian Union except the Ladakh and Kargil districts of Jammu and Kashmir, and the rural areas of Nagaland. The broad subject heads on which information was collected were (i) general particulars about the enterprise, (ii) employment and compensation to workers, (iii) account of stock and transactions, (iv) purchase and sale of principal commodities, (v) account of working capital, (vi) disbursement account, (vii) receipt account, (viii) inventory of fixed assets owned and rented, (ix) particulars of loans taken and loans outstanding, (x) purchase of commodities by source and location, (xi) gross sales by types of purchases, (xii) amount payable and (xiii) amount receivable. The reference periods for the subject heads (i), (x), and (xi) were last one year, for (ii), (vi) and (vii) were the last month and last year, for (iii) and (iv) last 30 days preceding the date of survey and for (v), (viii), (ix), (xii) and (xiii) were the date of survey.

Sampling Design

48.2 The sampling frame for first stage units (FSUS) in the rural sector consisted of 1981 Census villages showing number of Directory Trading Establishments (DTEs), Non Directory Trading Esablishments (NDTEs) and Own Account Trading Enterprises (OATEs) based on 1980 Economic Census except for Assam where 1977 Economic Census frame was used. In the urban sector, the sampling frame for selection of FSUs consisted of 1980 Economic Census—Enumeration Blocks (EBs) in the class I cities having 1981 census population 1 lakh and above and Urban Frame Survey (UFS) Blocks in the class II to class VI cities/towns. In case, however, where 1980 EBs were not distinctly indentifiable in class I cities the UFS blocks were used as the sampling frame. The second stage samplings units in both urban and rural sectors consisted of units in the NDTEs and OATFs.

The broad sampling design used was stratified two stage sampling. For stratification states were divided into regions by grouping contiguous districts similar in respect of population density and cropping pattern The strata, thus, usually consisted of group of districts belonging to FOD region X NSS region. In case of Gujarat state, however, where NSS regions cut across district boundaries, strata consisted of group of Taluks spread over different districts. However, in a few cases a very small FOD region X NSS region containing a small number of DTEs and NDTEs were grouped with the adjacent FOD region X same NSS region to form a stratum to obtain a sizeable sample size. The total number of rural strata thus formed numbered to 84. With a view to netting

adequate number of DTEs and NDTEs in the sample, the villages in a stratum were grouped into three sub-strata based on 1980 (1977 for Assam) Economic Census figures—where sub-stratum I consisted of all villages having at least one DTE ; sub-stratum-II consisted of all the villages having no DTE but having atleast one NDTE ; and sub-stratum-III consisted of the residual villages having neither DTEs nor NDTEs.

In the urban sector, each city with 1981 census population 5 lakhs or more was treated as a stratum by itself. Other class I cities within each state were grouped into two strata consisting of (i) those using 1980 EC-EBs as frame and (ii) those using UFS blocks as frame. All other cities|towns of a state formed a separate stratum. Strata using 1980 EC-EBs were further divided into four sub-strata where sub-stratum-I consisted of EBs with high concentration of wholesale dealers; sub-stratum-II consisted of residual EBs having neither DTE nor NDTE. Similarly, strata using UFS blocks were further sub-divided into 3 sub-strata consisting of (i) blocks with high concentration of wholesale dealers ; (ii) residual blocks with area type "bazar area" and (iii) residual blocks.

The total of all India first stage sample was distributed over state|UT|FOD region level taking into consideration the Investigators' strength. Sample size for a state|UT|FOD region was distributed over rural and urban sectors in proportion to 3 no. of DTE + no. of NDTE in respective sectors based on 1980 E.C. figures. The rural and urban sample sizes at State|UT level were further allocated to constituent strata in proportion to 3 number of DTE + no. of NDTE in the respective stratum-I.

In the rural sector, the sample size for a stratum was allocated to 3 sub-strata as follows : A thin sample of 8 (or a multiple of 8) FSUs was first allocated to sub-stratum 3 depending on number of OATEs. The residual was allocated to sub-strata 1 and 2 in proportion to 3 number of DTE + number of NDTE in the respective stratum. Some adjustments were made in a few cases to make the sample size commensurate with the Investigators strength in a FOD region. Sample size for each stratum X sub-stratum was made 8 or a multiple of 8 to facilitate selection of samples in the form of 2 interpenetrating sub-samples and 4 sub-rounds. Allocation for sub-stratum 4, if any, was 8 over the whole state. In the urban sector, allocation of samples to sub-strata consisting of class I cities where 1980 EC-EBs were used as the sampling frame was as follows : A thin sample of 8 (or a multiple of 8) FSUs was first allocated to sub-stratum 4. The remaining samples were allocated to sub-stratum 1, 2 and 3 in proportion to 3 number of DTE + number of NDTE with four times weightage given to sub-stratum I with the main motive to net more wholesale traders in the sample. Sample size for a stratum X sub-stratum was adjusted to 8 or a multiple of 8, as in the rural sector, to facilitate selection of samples in the form of 2 interpenetrating sub sub-samples and 4 sub-rounds. For strata where U.F.S. sampling frame was used the sample size for a stratum was allocated to the constituent sub-strata as follows : A thin sample

of 8 (or a multiple of 8) was first allocated to the sub-stratum 3 on the basis of the total number of blocks. The residual was allocated in sub-stratum 1 and 2 in proportion to the number of UFS blocks in the respective sub-stratum with 4 times weightage given to sub-stratum 1.

The selection of first stage units in the rural sector was done, separately for each stratum X sub-stratum independently for 2 sub-samples, circular systematically with probability proportional to size, size being number of DTEs in sub-stratum 1, number of NDTE in sub-stratum 2 and number of OATEs in sub-stratum 3 after assigning size 1 to each village belonging to sub-stratum 3 having no OATEs. However, for Delhi, Goa, Daman and Diu, the size was 3 DTE + NDTE for sub-stratum 1 villages and number of OATEs after assigning size 1 to the villages having no OATEs. For Arunachal Pradesh samples in both sub-strata 1 and 2 were selected with equal probability because of complete enumeration of sub-stratum 1 villages and to facilitate formation of clusters around sub-stratum 2 villages. In practice, generally twice the number of units allocated were selected for each sub-sample and the sample villages with odd orders of selection formed the Central sample and those with even orders formed the state samples. Within the central sample, sample village numbers 1, 5 were allotted to sub-round 1; 3, 7 to sub-round 2 ; 2, 6 to sub-round 3 ; and 4, 8 to sub-round 4 independently for 2 sub-samples (this order was reversed for the state sample). Villages in sub-stratum 4 if any, were selected at random with equal probability.

In the urban sector, for strata where UFS sampling frames were used, the first stage units i.e. the UFS blocks, were selected circular systematically with equal probability from among the UFS block belonging to the respective sub-strata. For strata where 1980 EC-EBs were used as the sampling frame, the EBs were selected circular systematically with probability proportional to 3 DTE + NDTE in sub-stratum 1, DTEs in sub-stratum 2, NDTEs in the sub-stratum 3 and OATEs in sub-stratum 4 after assigning size one to each EB belonging o sub-stratum 4 having no OATE. Samples were selected in the form of 2 independent sub-samples for each sub-stratum of a stratum. For sub-stratum 1 consisting of UFS blocks| EBs with high concentration of wholesale dealers, the UFS blocks|EBs were first arranged within a sub-stratum by major commodity group (3 digited NIC group code) and then selection of samples was done from this arranged frame so that different commodity groups were proportionately represented in the sample procedure for selection of central and state samples and allotment of samples to different sub-rounds were the same as in the rural sector as mentioned in the earlier paragraph.

Large sample villages|blocks were divided into suitable number of hamlet groups|sub-blocks in order to control the workload mainly at the stage of listing the households and trading enterprises. A new innovation was adopted in the design of the 41st round by giving special attention to areas of concentration of trade. Before dividing the sample villages| blocks the areas with the highest concentration (e.g.

market, bus stop area etc.) was carved out provided such compact area having at least 10 trading enterprises existed in the sample FSU. This compact area called "area of concentration" was surveyed in every case. After carving out the area of concentration, the residual area of the sample village|block was divided into the specified number of hamlet groups|sub-blocks randomly selected in addition to the area of concentration. In case where no such compact area with at least 10 trading enterprises existed or when the number of enterprises was large but evenly spread over the whole sample village|block area of concentration was not carved out. In such cases the whole sample village|block was divided into specified number of hamlet groups|sub-blocks and one of them was randomly selected for survey.

For the selection of second stage units i.e. enterprises, all trading enterprises eligible for survey in a sample village|block were grouped into two classes namely (a) wholesale trading enterprises and (b) others. The other enterprises were further grouped into three classes namely, (i) retail trading enterprises (ii) commission agents, brokers, auctioneers etc. and (iii) free collection for sale etc. Then 4 second stage strata were formed consisting of (i) second stage stratum 1 with wholesale OATEs; (ii) second stage stratum 2 with other OATEs, (iii) second stage stratum 3 with wholesale NDTEs; and (iv) second stage stratum 4 with other NDTEs. Enterprises belonging to a second stage stratum were arranged by 3 digited NIC group code separately for each of the second stage strata. Sample villages|blocks where

"area of concentration" was carved out this arrangement was done independently for "area of concentration" and other selected hamlet group|sub-block. The required number of sample enterprises was selected circular systematically with a random start from this arranged frame separately for each of the 4 second stage strata. In sample villages|blocks where area of concentration was carved out 20 enterprises were selected while in the rest only 14 enterprises were selected for detailed enquiry.

The all-India size for central sample consisted of 4328 villages and 10099 blocks whereas for the state sample it was 4840 villages and 11924 blocks.

Field Work

48.3 The field work was done by the Field Operations Division (FOD) of NSS during July, 1985 to June, 1986. Full time regular and experienced staff of NSSO comprising 438 Asstt. Superintendents and 815 Investigators collected data through oral information and by going through establishment records. The field staff were thoroughly trained in concepts, definitions and operational procudures to be followed in the conduct of the survey. To ensure quality of information collected surprise, concurrent and post-enumeration checks were conducted besides 100 per cent inspection. By December, 1985 about 60719 detailed enquiry schedules were canvassed in 2050 villages and 4914 urban blocks. The number of interviews conducted by the Investigator depended on the field conditions.

CENTRAL STATISTICAL ORGANISATION, MINISTRY OF PLANNING, NEW DELHI

49. Directory Trade Establishment Survey, 1985-86

Introduction

49.1 The main objective of this *ad hoc* survey, undertaken by the Central Statistical Organisation (CSO) as a follow up survey of the second Economic Census (1980), was to collect detailed information on trading establishments. The field work of the survey was conducted by the Field Opeartions Division (FOD) of the National Sample Survey Organisation (NSSO). During the second Economic Census, trading enterprises were classified into three broad categories (a) own-account trading enterprises (OATEs), that is, trading enterprises not having any hired worker, (b) non-directory trading establishments (NDTEs) that is, trading enterprises employing at least one hired worker and having total number of workers including household workers as 5 or less and (c) directly trading establishments (DTEs) that is, trading enterprises employing at least one hired worker and having total number of workers including household workers as 6 or more. While the 41st round of the National Sample Survey (July, 1985—June, 1986) was devoted to the survey of NDTE and OATE, the directory part was covered through this survey. The trading activities of wholesale and retail traders,

purchase and sale agents, commission agents, brokers and auctioneers were covered in this survey. All public sector trading establishments were out of the survey coverage. The survey covered the whole of India except Ladakh and Kargil districts of Jammu and Kashmir and rural areas of Nagaland.

The broad subject heads on which the information was collected on various aspects of trading establishments related to (i) particulars of establishment, such as, trade class, commodities traded, industry (NIC code), ownership, accounting period etc., (ii) average employment and emoluments, (iii) purchase value of commodities by source and location, (iv) sale value of commodities, (v) inventory of working capital, (vi) expenses relating to trade, (vii) inventory of fixed assets, (viii) outstanding loans, (ix) amounts payable to sundry creditors and (x) amounts receivable from sundry debtors. The reference period for collection of infomation varied from item to item.

Sampling Design

49.2 Census villages showing number of DTEs, NDTEs and OATEs based on 1980 Economic Census served as the sampling frame for first stage units in the rural areas, except for Assam where 1977

Economic Census frame was used. In urban areas, enumeration blocks of the 1980 Economic Census served as sampling frame in respect of class I cities (cities having 1981 census population 1 lakh or more) and in other cities|towns Urban Frame Survey (UFS) blocks served as frame for first stage units. However, in Class I cities where 1980 Economic Census enumeration blocks were not distinctly identifiable, UFS blocks were used as the sampling frame.

The sampling design in both rural and urban sectors was two stage stratified sampling. In rural areas, usually a group of districts constituted a stratum and in all 84 rural strata were formed. In addition, one stratum termed as stratum no. 0 was formed in each of 11 states consisting of all the 1981 census villages in a state missing in the 1980 Economic Census frame used for sample selection. Each basic stratum was divided into three sub-strata where sub-stratum 1 consisted of all villages having at least one DTE, sub-stratum 2 consisted of all the villages having no DTE but having at least one NDTE and sub-stratum 3 consisted of the residual villages having neither DTE nor NDTE. In urban sector, all the cities|towns in a state|union territory were formed into two groups. Group A consisted of the cities|towns with high concentration of wholesale traders and the rest of the cities|towns constituted group B. Each city with 1981 census population 5 lakhs or more was treated as a stratum by itself. The remaining class I cities within each state were grouped into 2 strata— (i) those where 1980 Economic Census enumeration blocks were used as the sampling frame and (ii) those where UFS frame was used. All other cities|towns of a state formed a separate stratum. Cities|towns belonging to group A formed a separate stratum within a stratum. In class I cities where 1980 Economic Census enumeration blocks were used as the sampling

frame, the rest of the enumeration blocks were grouped into 3 sub-strata following the principle adopted for the rural areas. In class II to VI cities|towns and class I cities where UFS frame was used the UFS blocks (excluding those covered under cities|towns belonging to group A) marked with area type as 'bazar area' in UFS frame formed a separate sub-stratum. The residual UFS blocks formed another sub-stratum. The ultimate sampling unit in every case was a directory trade establishment. All the rural and urban samples having at least one DTE located and listed in the course of 41st NSS round were surveyed. In case the central and state samples did not yield the requisite number of DTEs, provision had been made for having augmented samples to the extent required following the scheme of sampling of villages and enumeration blocks from sub-stratum 1 as adopted in the 41st round of NSS. The survey was expected to cover about 30000 DTEs.

Field Work

49.3 The field work of the survey commenced on 1 November, 1985 and was likely to continue till the end of December, 1986. Data were collected through field enumeration by seeking information from respondents and by going through the records maintained by the trading establishments. About 200 Assistant Superintendents were deployed on the field work and their work was supervised by the Superintendents and Assistant Directors posted in various regions of Field Operations Division of the National Sample Survey Organisation.

Data Processing

49.4 Data processing was to be taken up after the completion of field work in December, 1986.

APPENDIX

Agency-wise list of Surveys

Sl. No.	Name of the Survey Agency	Number and Title of the Survey	Page No.
1	2	3	4

Central Ministries/Departments

Sl. No.	Name of the Survey Agency	Number and Title of the Survey	Page No.
1.	Ministry of Agriculture and Rural Development, New Delhi.	1. Comprehensive scheme for studying the cost of cultivation/production of principal crops in India.	1
2.	-do-	14. Sample surveys on estimation of production of major livestock products—milk, eggs, wool and meat.	9
3.	-do-	39. Concurrent evaluation of integrated rural development programme beneficiaries.	24—25
4.	Indian Agricultural Statistics Research Institute, New Delhi.	2. Pilot sample survey to evolve a sampling methodology for estimation of inland fishery resources and catch in a region of Orissa.	1
5.	-do-	3 Statitical investigation on economics of pig production.	1—2
6.	-do-	36. Development of a suitable statistical methodology for estimating extent of labour utilization in live-stock and poultry keeping in rural areas of Meerut.	23
7.	Office of the Registrar General of India, Ministry of Home Affairs, New Delhi.	21. Sample Registration System.	13
8.	Labour Bureau, Ministry of Labour, Chandigarh.	40. Socio-economic conditions of women workers in bricks, tiles, radio, etc. industries.	25—27
9.	-do-	41. Working and living conditions of labour belonging to scheduled caste employed in sweeping and scavenging, tanning etc.	27
10.	Central Statistical Organisation Ministry of Planning, New Delhi.	34. Annual survey of Industries, 1984-85.	22
11.	-do-	38. Project on internal migration in India.	24
12.	-do-	49. Directory Trade Establishment Suvey—1985-86.	34—35
13.	National Sample Survey Organisation, New Delhi.	48. Survey on wholesale and retail trade—NSS 41st round.	32—34

States/Union Territories

Sl. No.	Name of the Survey Agency	Number and Title of the Survey	Page No.
14.	Directorate of Agriculture, Assam, Guwahati	4. (i) Productivity survey of wheat for irrigated and unirrigated crops.	2
		(ii) Yield estimation survey of Jute for early flowering and normal crops.	2
15.	Economic and Statistical Organisation, Haryana, Chandigarh.	6. Evaluation study of the impact of seed production and distribution programme.	3—4

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Sl. No.	Name of the survey agency	Number and Title of the Survey	Page No.
1	2	3	4
16.	Economic and Statistical Organisation Haryana, Chandigarh	15. Evaluation study of the Indo-Australian cattle breeding project, Hissar.	9—10
17.	-do-	20. Evaluation study of the quality of science education in High School.	13
18.	-do-	23. Evaluation study of the sterilization programme in Haryana.	15
19.	-do-	43. Evaluation study of Integrated Rural Development Programme in Haryana.	20—29
20.	Department of Planning, Himachal Pradesh Shimla.	7. Evaluation study of horticultural programme in Shimla and Kullu districts.	4
21.	-do-	44. An evaluation study of Bio-gas plants in Himachal Pradesh.	29—30
22.	Directorate of Economics and Statistics, Karnataka, Bangalore.	8. Crop estimation survey on fruits, vegetables and minor crops.	5
23.	Department of Health Services, Kerala, Trivandrum.	25. Operational research for comprehensive study of primary health care.	16—17
24.	Director of Economics and Statistics, Madhya Pradesh, Bhopal.	12. Socio-economic survey of water management areas of existing medium irrigation projects Ajnal and Saroda in Madhya Pradesh.	7—8
25.	-do-	26. Survey of health workers, their opinion and attitude—policy implication for srengthening family planning programmes.	17
26.	Directorate of Economics and Statistics, Maharashtra, Bombay.	45. An evaluation study of bio-gas plants in Maharashtra.	30
27.	-do-	46. Evaluation study of block level village Artisan, Multipurpose Cooperative Societies.	31
28.	Bureau of Economics and Statistics, Orissa, Bhubaneswar.	9. Studies on comparative performance of mixed farming involving crop, livestock, poultry and fish in Orissa.	5—6
29.	-do-	10. Sample survey for study of constraints in transfer of new agricultural technology under field conditions.	6
30.	Economics and Statistical Organisations, Punjab, Chandigarh.	13. Survey regarding estimation of gross fixed captial formation in private fish farms in Punjab.	8
31.	-do-	47. Impact of loans/subsidies to weaker sections of society in Punjab.	31—32
32.	Department of Animal Husbandry Government of Punjab, Chandigarh.	16. Cost of milk production study.	10
33.	Labour Commissioner, Punjab, Chandigarh.	37. Survey regarding working and living conditions of agriculture labourers in Jalandhar and Bhatinda.	23—24
34.	Director of Animal Husbandry, Uttar Pradesh, Lucknow.	17. A rapid survey for estimating number of bullocks over 15 years and their cost in Bundelkhand region of U.P.	10—11
35.	-do-	18. A rapid survey for studying the causes of decrease in the population of Jamunapari goats in the villages of Etawah district of U.P.	11—12