

Volume 3
'Para - veterinarians and Animal Health Workers in Andhra Pradesh'

Service Delivery, Supplies, Support and Supervision

Volume 1

Assessment and Reflections on Livestock Service Delivery Systems in Andhra Pradesh
 Presents the experiences from an initiative aimed at developing a widely owned reform action plan for livestock service delivery taken up in Andhra Pradesh through a multi-stakeholder, multi-tier, multi-regional consultative process.

Volume 2

Para-veterinary Training programmes in Andhra Pradesh
 Provides a comprehensive listing of all organizations extending trainings to Para-vets and Para-veterinary workers in Andhra Pradesh, an assessment of their training programmes, deficiencies and gaps and suggestions for their improvement.

Volume 4

Mainstreaming Minor Veterinary Services in Andhra Pradesh
 Presents a definition of the Minor Veterinary Services recommended by the Expert Group to the Government of AP as required under the Veterinary Council of India Act 1984 and the participatory process gone through in arriving at the recommendations.

Volume 5

Control strategy and Action Plan for Animal Diseases of Economic Importance in Andhra Pradesh
 Covers the livestock demography, the Veterinary and Animal Husbandry infrastructure, disease investigation and reporting system, long term trends and profiles of the identified five diseases and the vaccinations and control strategy.

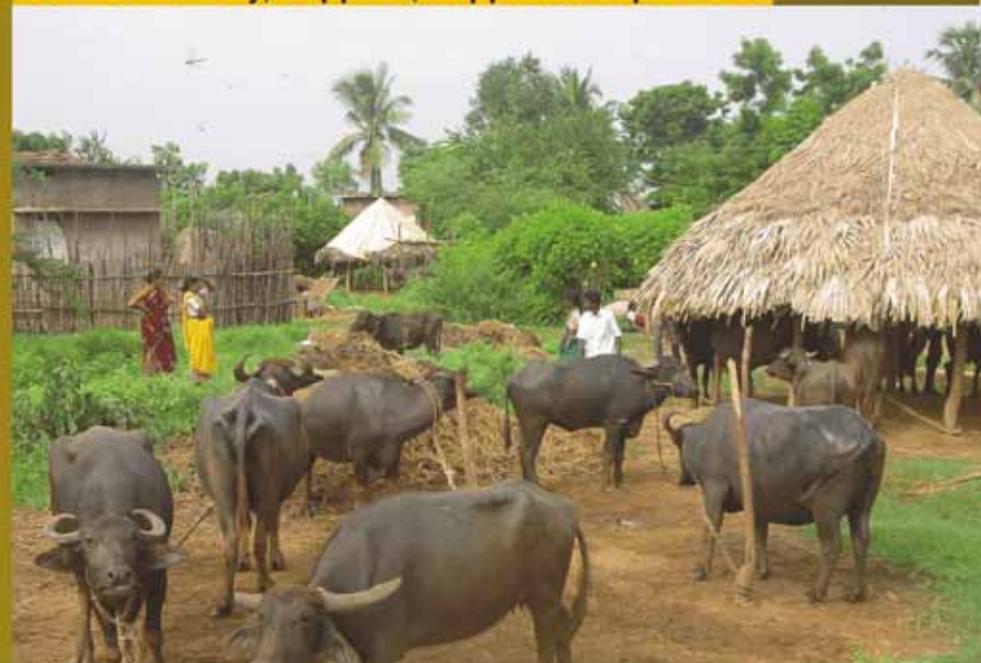
A separate document on each of these is presented as a part of this compendium. The participatory process in which the state department of AH and the other stakeholders played a central role, improved the acceptability and implementability of the reforms proposed. As a result, the state department of Animal Husbandry has accepted and implemented many of the recommendations emerged from this initiative. With refinements, the process could demonstrate an effective model for service reforms elsewhere.

This document presents the details of a vast study of the Para-veterinary services in Andhra Pradesh supported by CALPI, (Capitalisation of Livestock Programme Experiences India), a programme of the Swiss Agency for Development and Cooperation and the Intercooperation, together with the South Asia Hub of the Pro-Poor Livestock Policy initiative (PPLPI) of the Food and Agriculture Organisation (FAO) and the Department of Animal Husbandry, Government of Andhra Pradesh. The study was aimed at understanding the deficiencies and gaps in service delivery by Para-veterinarians and Para-vet. workers and suggesting improvements in their performance. The document covers the profile of para-veterinarians and the Animal Health Workers in Andhra Pradesh, their placement, services delivery, supplies, support and supervision and overreach beyond the scope of their training.

The widespread consultations taken up under this initiative enabled the stakeholders to gain a better understanding of their needs in service delivery. They also enabled them to make informed decisions to widen the scope of the consultations and research in to newer topics as presented in volumes 1 to 5.

Para-veterinarians and Animal Health Workers in Andhra Pradesh

Service Delivery, Supplies, Support & Supervision



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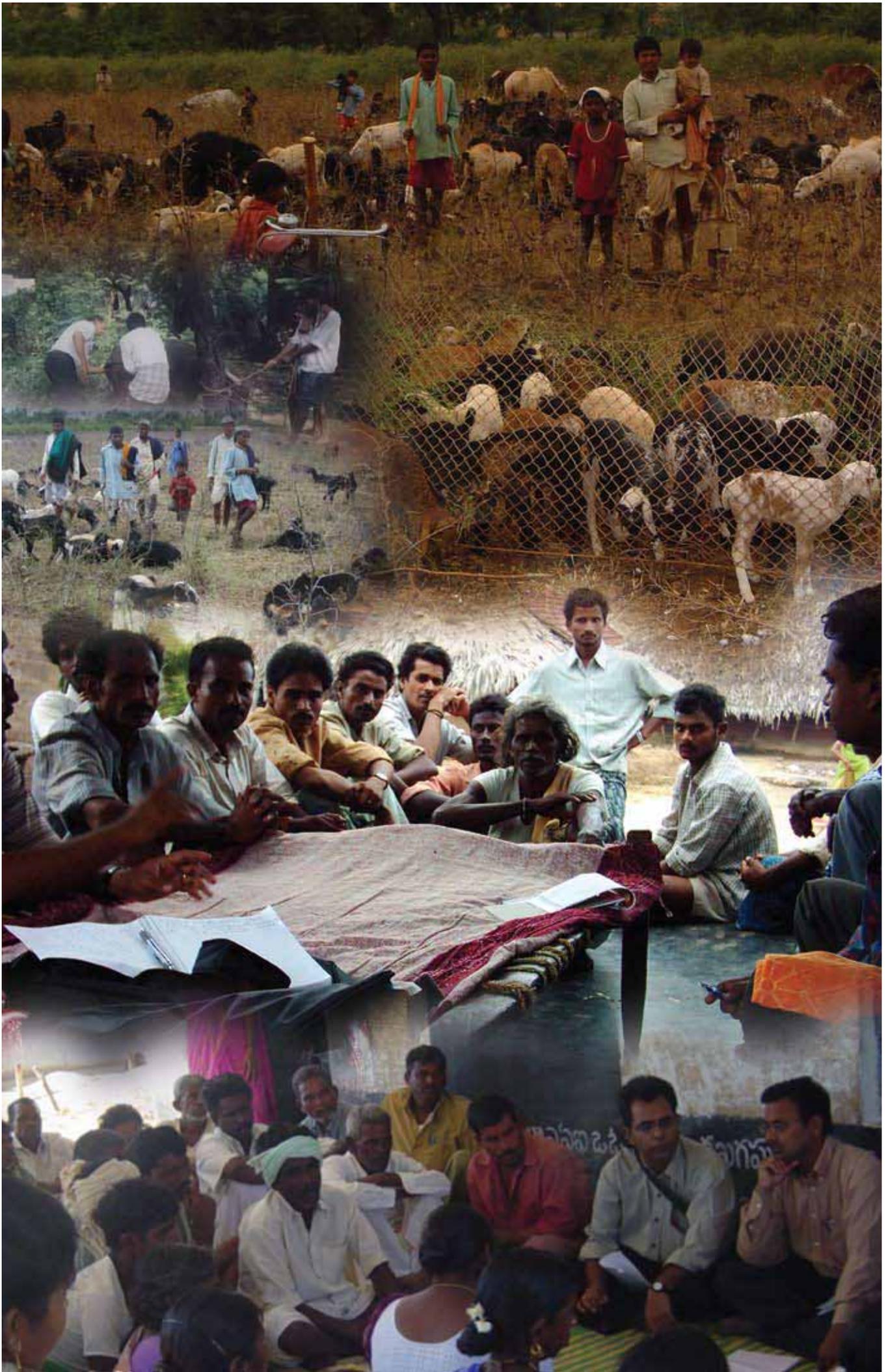
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Para-veterinarians and Animal Health Workers in Andhra Pradesh

Service Delivery, Supplies, Support & Supervision







CONTENTS

Abbreviations	ii
Foreword	iii
Message	iv
Preface	v
Executive Summary	vii
Introduction	1
1. The Study	2
1.1 Individuals interviewed	
1.2 Features of the sample households - Farmers	
2. Animal Health Workers (AHWS) in the Field	4
3. Outreach of the Animal Health Workers	5
4. Service Delivery - Views of the Animal Health Workers	5
5. Service Delivery - Views of the Farmers	9
5.1 Profile of the Farmers	
5.2 Farmers' Views on the Quality of Services	
5.3 Usage of AI service by the farmers	
5.4 Usage of vaccination service	
5.5 Farmers' views on disease incidence & treatment	
6. Service Delivery - Views of Mandal/APLDA (LCPS)	18
6.1 Profiles of LCPs	
6.2 Views of LCPs – Qualitative aspects	
6.3 The views of LCPs - Quantitative aspects	
7. Over-Reach by AHWs	19
7.1 Views of the AHWs	
7.2 Views of LCPs	
7.3 Views of the farmers	
8. Supervision, Supplies & Support	21
8.1 Existing system	
8.2 Views on sustaining AHWs in the future	
9. Future Strategies, Conclusions & Recommendations	25
9.1 Trainings provided to Para-veterinarians and Paravet workers	
9.2 Present livestock service delivery by Para-veterinarians and Para-vet workers	
9.3 Improving the effectiveness of the services	
9.4 Gopal Mitra in the field	
9.5 Vaccination of small ruminants & backyard poultry	
9.6 Need for a further study	



ABBREVIATIONS

AHC	Animal Health Centre
AH & VS	Animal Husbandry & Veterinary Services Department
AI	Artificial Insemination
AP	Andhra Pradesh
APLDA	Andhra Pradesh Livestock Development Agency
BQ	<i>Black Quarter</i>
CALPI	Capitalisation of Livestock Programme Experiences India
DIS	Disease Information System
DAH	Department of Animal Husbandry
DPU	District Project Unit
DVO	District Veterinary Officer
ET	<i>Enterotoxaemia</i>
FAO	Food & Agriculture Organization of the United Nations
GDP	Gross Domestic Product
HS	<i>Hemorrhagic Septicemia</i>
IC	Intercooperation
ICAR	Indian Council of Agricultural Research
IVRI	Indian Veterinary Research Institute
PD_ADMAS	Project Directorate on Animal Disease Monitoring and Surveillance
PPR	<i>Peste des Petits Ruminants</i>
PPLPI	Pro-Poor Livestock Policy Initiative
NGO	Non-Governmental Organization
RD	<i>Ranikhet Disease</i>
SDC	Swiss Agency for Development and Cooperation
SMILDA	State Management Institute for Livestock Development, Andhra Pradesh
VBRI	Veterinary Biologicals Research Institute

Disclaimer

The opinions expressed in this publication are solely those of the author(s) and do not constitute in any way the official position of the Food and Agriculture Organization of the United Nations (FAO), the Swiss Agency for Development and Cooperation (SDC), Intercooperation (IC) and the Government of Andhra Pradesh.

Keywords

Animal Health Workers, Para-Veterinary Workers, Livestock Service Delivery, Regulatory Framework, Field Livestock Services

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FOREWORD

The Swiss Agency for Development and Cooperation (SDC) and the Intercooperation (IC) have been actively involved in livestock-based livelihoods and natural resource management in India for many decades. CALPI (Capitalisation of Livestock Programme Experiences India), a programme of the SDC and IC, capitalises on these vast experiences, competencies and partnerships to positively influence the economic, administrative, legal and policy frame conditions affecting the poor livestock keepers. One of the thrust areas of CALPI, the Livestock Service Delivery Systems, facilitates the establishment of a need-based livestock service delivery system for the benefit of small livestock holders.

The “Reforms in Livestock Service Delivery Systems –Experiences from a Participatory Process in Andhra Pradesh” formed one of the many initiatives taken up under this thrust area. This initiative was jointly implemented by CALPI, the South Asia Hub of the Pro-poor Livestock Policy Initiative (PPLPI) of FAO and the Government of Andhra Pradesh Animal Husbandry Department. The main aim of the initiative was to: (i) create a favourable environment for facilitating policy and structural adjustments in livestock service delivery, and (ii) develop a widely owned reform action plan for service delivery in the state. The multi-stakeholder participatory process enabled the stakeholders to identify the weaknesses and deficiencies of the prevailing service delivery systems and their unmet service needs. It also led to a further review, reflection and widening of the consultative process extending it to more villages and districts in the coastal and the tribal areas, members of the District Sheep Breeder’s Cooperative, Tribal Communities, their Networks and the Traditional Healers.

The initiative was guided by a Steering Committee (SC) which comprised of all the key stakeholder categories and was chaired by the Principal Secretary/Special Chief Secretary of the Departments of Animal Husbandry, Dairy Development and Fisheries of the State Government. In addition, a Common Task Force (TF) oversaw the meetings, workshops, consultations, studies and documentation. By remaining active at the centre of all multi-level consultative processes, the Government took ownership of the decisions taken and ensured better acceptability and implementability of the reforms proposed.

In the fast changing livestock production and trade environment, reforms of the type, particularly in livestock service delivery where the Government still continues to play a key role, are required to be taken up on a continuing basis. The process has also enabled the State Government to issue a Govt. Order defining minor veterinary services together with the skills and qualifications required to perform them, as required under the Veterinary Council of India (VCI) Act. In many respects, the participatory processes in which the Government played the key facilitating and steering role, is worth emulating by other State Governments in India as also other developing countries.

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The 'Reforms in Livestock Service Delivery Systems - Experiences from a Participatory Process in Andhra Pradesh' is the outcome of a partnership amongst the Government of Andhra Pradesh Animal Husbandry Department, CALPI (Capitalisation of Livestock Programme Experiences India) - a programme of the Swiss Agency for Development and Cooperation and the Intercooperation and the South-Asia hub of the Pro-poor Livestock Policy Initiative (PPLPI) of FAO. The main aim of the initiative was to develop a widely owned reform action plan for livestock service delivery in the state.

The initiative was unique in many respects. Firstly, its open and flexible approach, inclusive frame, periodic review, reflection and adjustments and well-founded evidence base through research. Secondly, its multi-stakeholder, multi-regional, multi-tier consultative process participated by all key categories of stakeholders. It involved Participatory Rapid Appraisals (PRAs), meetings, workshops as well as individual consultations with farmers, farmer organisations, NGOs, veterinary students, village, district and state level functionaries of the government AH Department; the State Veterinary Council, planners and policy makers and an expert group. Thirdly, the Government played a central, active facilitating role at the grass roots and at the district levels and a guiding and steering role through the steering committee at the state level.

In the consultative process, all categories of stakeholders actively participated from the beginning. Such participation, especially of the Government functionaries, improved the ownership, acceptability and implementability of the reforms and provided a unique and interesting experience to all participants. As a result, most of the recommendations like improved attention to preventive health care by the Government, enhanced coverage of animals under the department's preventive health care programmes, enhanced production of vaccines especially for small ruminants, coverage of more animals of the poor under insurance, expansion of the para-veterinary programmes, etc. could be accepted and implemented. Similarly, the overall budgetary allocation for Animal Husbandry activities of the department has been expanded considerably as also is the capacity development activities for all categories of staff. In this respect, an open, flexible and participatory approach followed in the reforms process formed the key to its success and is worth emulating by other state Governments in India as also by other developing countries.

Priyadarshi Dash



PREFACE

In the recent years there has been an increasing recognition of the role played by Para-professionals and Community Based Animal Health Workers (CBAHWs) in improving the availability of livestock services in poor and marginal areas and in reducing the overall cost of service delivery in developing countries. Due to their generally positive role, a number of livestock development projects now recognise para-professionals and AHWs as useful allies in achieving project objectives.

Over the last several years, Andhra Pradesh has also experimented with utilisation of CBAHWs for providing health and breeding services to poor farmers. Nearly all organisations engaged in livestock service delivery, both governmental and non-governmental, have employed AHWs for delivering services. While their contribution has been generally appreciated by the farmers, there are also concerns about their financial sustainability and the poor supervision and support systems leading to AHWs extending their brief and delivering services that they are not trained for.

This study was initiated to examine some of those concerns and to understand multiple perspectives on how CBAHWs could be better integrated into mainstream livestock service delivery systems. The study was undertaken under the auspices of a larger project to reflect and assess the effectiveness of livestock service delivery systems in Andhra Pradesh. The study was organised in two phases. The focus of the first phase was to create a comprehensive listing of all organisations providing training to para-veterinarians and AHWs in Andhra Pradesh, and to examine their curriculum and human and physical resources that have a bearing on the overall quality and the relevance of the training programs. The second phase then examined the ground situations of service delivery by trained AHWs based on a survey of rural households, AHWs, government officials, training institutions and local concerned persons. This report presents the results of the second phase of the study.

During the course of this study, we received immense cooperation and help from several individuals, professional experts, NGO's and Governmental institutions in the preparation of this document. We sincerely express our deepest gratitude to all of them.

Prof. Vinod Ahuja, Associate Professor, IIM Ahmedabad and Team Leader (PPLPI, South Asia), Dr. Meeta Punjabi, Consultant, PPLPI (South Asia), Dr. A.K. Joseph, Senior Program Coordinator and Mr. Padmakumar, Program Coordinator, CALPI, Dr. R. Mohan Rao – former Director, Dr. L. Mohan – present Director, Dr. Piedy Sreeramulu, Additional Director, of the State Animal Husbandry Department along with many of their very helpful field officers; Dr. Nissar Hussein, CEO, APLDA; and Ms. Rebecca Katticaren, Senior Programme Coordinator NRMPA (Natural Resource Management Program Andhra Pradesh) made valuable personal contributions to the successful completion of this study and report. We are indebted to them for their kindness.

If we could succeed in carrying out the most crucial and central aspect of this study, namely, a series of extensive field surveys, the credit goes to several nice people for their help and cooperation:

- a) The Joint Directors (AH) of Anantapur, East Godavari, Mahbubnagar, Nizamabad and Visakhapatnam districts and their field staff;
- b) Chiefs and their colleagues of NGOs – Dr. Sagari Ramadas of ANTHRA, Dr. G S Reddy and

Mr. Sivarudrappa of BAIF (Bharat Agro Industries Foundation), Dr. B. Gurava Reddy of JK Trust and Sri Muniratnam Naidu garu of Ryalaseema Seva Samithi;

- c) In-charge persons of the Regional and the District Animal Husbandry Training Centres, Veterinary Polytechnic Training Centre of the State Agricultural University and Dr. B. Anantam, Joint Director SMILDA (State Management Institute for Livestock Development Andhra Pradesh) and his team of officers;
- d) The interviewed farmers of the above districts;
- e) The interviewed Animal Health Workers of the AH Dept and various NGOs and
- f) The interviewed Local – concerned officers, veterinary assistant surgeons and Joint Veterinary Officers/Veterinary Assistants/Stockmen of the AH Department; field in-charges of NGOs and concerned non-officials like elected representatives of Panchayats (grassroots level institution of local governance), Area Livestock Development Agencies/Breeders' Associations and other concerned village leaders.

Finally, we are grateful to FAO (PPLPI) and CALPI for giving us the opportunity to explore the topic in detail. The financial and technical support of CALPI, PPLPI, the APLDA and the Animal Husbandry Department, Government of Andhra Pradesh, is gratefully acknowledged.

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EXECUTIVE SUMMARY

1. Introduction

The first report of this study entitled 'Para-veterinary Training Programmes in Andhra Pradesh' covered various aspects of training of 'paravets' (1 or 2 year courses, to prepare candidates for posting as government paravets in AHD) and 'Animal Health Workers' (40 to 180 days courses, to prepare candidates for placing community-based animal health workers) in Andhra Pradesh. This second and concluding report covers results and discussions on various aspects of - a) Placement of; b) Service Delivery by; c) Supplies to, and d) Support and Supervision of the community based Animal Health Workers (AHWs). There could be some overlap of issues and topics discussed in the two reports. But, in the interest of making each of the two reports self-contained, such overlaps may be ignored.

2. The study

1. The study was conducted in four districts of Andhra Pradesh by interviewing 409 farmers, 113 AHWs of different types and 78 local officials and elected people's representatives concerned with the day-to-day working of the AHWs, using appropriately designed questionnaires. Besides, the data obtained in a 2004 study by VLDA/APLDA in the three north coastal Andhra districts covering 400 Gopal Mitras and their Supervisors was also analysed and studied.
2. All of the discussions in this report would be from the view points of three types of individuals namely, the farmers, the service providing AHWs and those concerned with the supply, support and supervision of the AHWs at the ground level.
3. The general classification of households on the basis of land holding and social backgrounds is similar to the general trends of the same in the State in broad terms.
4. Only the households possessing livestock are considered for this study.

Different patterns of large and small ruminant holding of the samples are, in general, akin to the general proportions seen in the state.

5. The study has not specifically gone for a deliberate sampling of households for poultry holding patterns although backyard poultry is the most common in rural households especially in smaller numbers that would suit their resources and needs.

3. Animal Health Workers (AHWs) in the field

a) Profile of an AHW:

1. The average age of an AHW was 29 years with a range from 19 to 43 years.
2. A majority of them had studied up to the 10th Class, about 30% till 12th Class and about 8% were either graduates or had actually completed their undergraduate education. Almost all of them were well conversant with the local language.
3. On an average, an AHW had 4 years of work experience and covered about 5 villages with a range of 1 to 10 kilometres.

b) Placement & residence:

1. About 76% of the AHWs resided in one of the villages where they worked. Also, almost all of them stay and work in the same Mandal (Block).

c) Mobility:

1. Nearly 76% of the Gopal Mitras and all the NGO supported AHWs possessed and used a two-wheeler for service delivery; but none of the Small Ruminant Extension Workers or Tribal AHWs possessed any.
2. On an average, the sample AHWs travelled about 124 kilometres per week spending Rs. 294 for the same.

4. Service delivery

a) Outreach of the AHWs:

1. The primary job of Gopal Mitras and of the AHWs supported by the BAIF and the JKT is to provide AI service at the doorsteps of the farmer. Gopal Mitras are also trained for providing basic first

aid service to the animals. In practice, Gopal Mitras indulge in providing a much wider range of services. AHWs of RASS are unique in that they provide all the services besides helping in organising the production and marketing aspects also by women Self-Help Groups, albeit in a limited area.

2. Unfortunately, the Sangh Mitras and Women Poultry Extension Workers trained for Velugu (AP Livelihood Project) are said to have mostly gone out of business due to a lack of patronage.
3. Veterinary Assistant and Vet Poly Technique programmes prepare paravets to be absorbed into the government service. These programs are of 1-2 year duration and the trainees are trained in greater depth on wider topics, given the demands of the duties that they are expected to perform.

b) Views of the AHWs:

1. The contribution of AHWs to provision of livestock services, almost invariably at the farmer's doorstep, is considerable. Also this contribution has increased over the years.
2. It appears that Gopal Mitras are lagging when compared with the AHWs of the NGOs BAIF and JKT, though they have shown a trend of improvement over the years. However, this difference has to be seen in comparison to the conditions under which the three types of AHWs operate. The Gopal Mitras are very much disadvantaged on their working conditions and incentives.
3. In marginalised and hilly/tribal areas, only a small proportion of the trained youth are 'working' due to a non-patronage by any one, low-income and low-confidence levels. The reasons are the low-priority of livestock-keeping with the tribals', the very limited scope by tribals' to pay the user charges, the inability of Trained Youth AHWs to advertise themselves and the constraints in travel.

c) Views of the farmers:

1. Amongst the services studied in terms of the quality, three categories emerge:

- a) AI, First Aid, Vaccination and Deworming, whose quality was felt to be mostly reasonable by the farmers;
- b) Livestock Management Advice, Fodder Development, Castration and the Use of Local Medicines whose quality was felt to be inferior by the farmers; and
- c) Others: The issue of the 'Organisation of Health Camps' was brought up by the farmers themselves under this category for which they felt that the AHWs are not up to the task.

All of the nearly 2000 Mandals of the State were classified as per their livestock production potential in an earlier study considering their livestock density, feed and other resources. The performance of the AHWs in such Mandals was as follows:

1. A very high percentage of farmers (70-85% of the 20) of the 'Very Low' livestock potential Mandals (hilly, tribal areas) opined that either the AHWs have 'Not Done' any service or the quality of all the services provided by them was 'Not Good'.
2. But 'Low' livestock potential Mandals turn out to be the most successful terrain for the AHWs; the animals being more important to the perhaps financially not-so-well endowed locals for livelihood. Farmers of the 'Medium' and 'High' livestock potential Mandals are, in general, the next best in the satisfaction levels with the services of the AHWs.
3. Majority of the Scheduled Castes (SCs) are 'Wage Labourers', who opined that 'AI' (68%) and 'Deworming' (55%) were either 'Not Done' or 'Not Good'; the other services being even more unsatisfactory to them. This trend is manifested for all the services provided by the AHWs. This neglect of the wage earning SC households with respect to the provision of livestock services is definite and disturbing.
4. In hilly tribal areas, perhaps due to their lower density of AHWs or their mobility or the ability or a combination of all three factors coupled with the as yet

low intensity of livestock production and greater poverty in this difficult region, almost all of the services were 'Not Done' as per the opinion of more than 70% (64-88%) of the farmers. This is a problem area – a challenge for the betterment of livestock services.

5. As regards AI, while there is not much of a difference between the different service provider AHWs (Gopal Mitra, JKT and BAIF) and AHD institutions (RLU & VD), the services of the JKT was more appreciated.
6. Unfortunately, the 'Not Done' and 'Not Good' responses of the farmers for all the services were highest (60-80%) in case of landless livestock keepers (who are generally the poorest) and decreases as the land holding size of the farmers increases.
7. As high as 65% (40-85%) of the '50-100' and '>100' categories of small ruminant holdings, who are invariably traditional shepherds felt that the services were either not provided ('Not Done') by AHWs or they were 'Not Good'.
8. 'Vaccination' and 'Deworming' services provided by the AHWs to birds across different backyard poultry units were better than that for small ruminants, as per the poultry keepers. However, the farmers said that just 5% of such birds are vaccinated!
9. Though every one — farmers, local concerned persons, working AHWs — felt that organisation of health camps is an important service for farmers' animals, such camps are not very frequent as of now; much less was the role of AHWs in them.

d) Views of the Mandal/APLDA Level Concerned Persons (LCPs):

1. The order of satisfaction of various individual services being provided by the AHWs in the field as per the opinion of the above mentioned local concerned persons can be grouped as follows:
 - a) Top Half — only around 5% saying 'Not Done' or 'Not Well' done — services in a descending order of delivery quality

were Vaccinations, Deworming, AI and First Aid, which may be considered as the service in which the AHWs are quite skilful and doing a more satisfactory job.

- b) Bottom Half — as many as 20 to 40% saying 'Not Done' or 'Not Well' done services in their descending order of delivery quality were Fodder Development, Castrations, Livestock Management Advice (Extension!), Use of Local Medicines and Organisation of Health Camps.

5. Over-reach by AHWs

1. Most of the AHWs, especially the Gopal Mitras do undertake actual 'Treatment' of animals (as against the provision of 'First Aid'). This is a case of over-reach by them as they are indulging in the Use of Antibiotics, Use of Analgesic/Anti-Allergy, Doing Injections, Using Uterine Pessaries, and Surgical Procedures.
2. Incidence of an over-reach as per the opinion of the Local Concerned Persons', the main errors of omission and commission and undesirable activities by AHWs perpetuated by the AHWs were:
 - a) Use of antibiotics (46%)
 - b) Use of wrong doses (17%)
 - c) Use of wrong techniques (13%)
 - d) Carrying out surgical procedures (9%)
 - e) Ignoring small ruminants (8%)
 - f) Improper care of equipment (7%)

6. Supervision, Supplies & Support (SSS)

a) Existing System:

1. For every 25 to 30 Gopal Mitras, there is just one supervisor. The VAS nearest to the Gopal Mitra's village is assigned with the task of support and supervision. But this 'nearest VAS' is not exclusive to the SSS work pertaining to the AHWs, but is just one of the many technical and non-technical tasks that are routinely assigned to them. In the case of AHWs employed by the BAIF, the JKT and the Small Ruminant Extension workers,

however, there are special personnel for providing necessary supervision and support.

2. Also, there is a dichotomy of an ultimate reporting authority, namely, APLDA and AHD whereas in the field, the Gopal Mitra is an entity providing all these services.
3. APLDA undertakes the production and the distribution of AI inputs - semen and liquid nitrogen, to Gopal Mitras as well as to the departmental AI centres. The NGOs BAIF and the JKT and the other AI service providers, supply these items from their own sources.
4. Vaccines and medicines, when available and to the extent possible, go through the channels of the AHD of the state, to AD ALDA and ultimately to the Gopal Mitras via the 'nearest VAS'. The other organisations supply through their own channels.

b) Quality of Supplies, Supervision and Support:

1. The percentage breakup of the AHWs saying that the service support and supervision were not satisfactory is as follows: 100%: Tribal VHWs, 80%: SR Extension Workers, 50%: NGO-JKT and 17%: Gopal Mitras.
2. About 89% of the responding farmers said that the attention to the support and supervision being paid to AI, First Aid and Vaccination services rendered by the AHWs was 'Good' and even 'Very Good'. The percentage of farmers



Para-vet services to be effective, require the support and supervision of qualified Vet. professionals

satisfied with the service, support and supervision, fell to about 40% (range 37-50%) for the other crucial services.

3. There is a scope for improvement of the quality of Supervision, Support and Supplies rendered to the AHW, especially of Tribal — VHWs, SR Extension Workers, AHWs of NGO, the JKT and the Gopal Mitras in that order.

c) Sustaining AHWs in the Future:

1. The general impression that one gets from all this exercise and discussions with the field staff including the AHWs themselves, is that they are on their own in the field. Unfortunately, the Gopal Mitras – the strongest AHW cadre in Andhra Pradesh with about 2,000 individuals in the field – also seem to be 'nobody's baby' at present.
2. The supply of AI related inputs has been very good according to almost all of the AHWs. But only some 30–40% of the AHWs said that the supply was good when it come to vaccines and deworming medicines. A creditable exception to this were the Small Ruminant Extension Workers, all five of whom felt the supply of vaccines and deworming medicines were good. Worse off was the supply of medicines for treatment, which in fact is not exactly a mandate for the AHD or APLDA.
3. As many as 95% of the AHWs, irrespective of the organisation, said that the supervision as well as the quality of the supplies provided by their supervisors has been 'good' and 'very good'. More or less similar was their opinion with regards to a follow-up of two other crucial activities, namely, pregnancy diagnosis and stock identification.
4. Farmers have consistently suggested AHD and the village Panchayat as the organisations that can support and sustain AHWs in future and improve their utility to the farmers. The only difference is the relative importance — 60% of the farmers saying that AHD should support the AHWs (Gopal Mitra being the main focus), the remainder opting for the village Panchayats.

5. It was those LCPs that are in direct contact with AHWs, their work and living conditions on a day-to-day basis were the ones most forthcoming with the suggestions.
6. The LCPs also felt that the AHD (39%), ALDA (16%) and the Village Panchayats (15%) could be the most potential ones that can own and patronise AHWs in the future.
7. The advantage with the AHD (also APLDA) is that, it can act as a sound base for their technical support, supplies, supervision and quality control of the services using judiciously paid stipend and incentives.
8. The study also revealed that the supervisors too need regular refresher trainings to improve their work vis-à-vis support and supervision of the Gopal Mitras on the management of human resources, time, money and means.
9. Thus, the three main steps needed for improving the support and supervision of Gopal Mitras that emerge from the above discussions are:
 - a) Attaching the AHWs to an organisation (AHD immediately and peoples / farmers' organisations ultimately) not just to channelise supplies and organise supervision, but also for a quality control of the services via tactically used financial incentives.
 - b) Training of the supervisors to impart to them people related management extension skills.
 - c) NGOs and area and/or beneficiary related development Projects could also be included in this.

7. Future strategies

a) Training:

1. In the interest of providing satisfactory livestock services to the farmers, it is necessary to have similarly trained AHWs providing the same service everywhere, whichever be the service providing organisation. In other words, whether Gopal Mitra or AHWs of NGOs, it is imperative that all those providing the same service have a common

comprehensive broad-based training.

2. It is suggested that a new AHW training course of six months duration (including two months internship) may be developed as per details furnished in the document 'Para-veterinary Training Programmes in Andhra Pradesh – Programmes, Curricula and Evaluation'.
3. So as to address the specific needs of the three problem areas, only the candidates from the respective societies and localities should be selected in consultation with the society elders; the selected candidate must satisfy the following admission qualifications:
 - a) Landless, daily wage earner, SC community-- From the same SC Society
 - b) Hilly, tribal, low-livestock potential area-- From the same Tribal Society
 - c) Medium & large flock owning Shepherds-- From the same Shepherd Society
4. Paravets: The AHD's one year and the State Agricultural University's two years training programmes for candidates to be posted as Paravets in the government service could very well be clubbed and one comprehensive programme after 10th Class organised by both organisations together.

b) Improving the Effectiveness of Services:

The following steps are suggested for improving the service delivery by AHWs and the Gopal Mitras and their support and supervision.

1. Attaching the AHWs to an organisation (AHD immediately and people -farmers' organisations ultimately) not just to channelise supplies and organise supervision but also for quality control of the services via tactically used financial incentives.
2. Training the supervisors to impart people-related management extension skills.
3. NGOs and area or beneficiary related development projects should also be

made a part of this.

4. Provide a monthly stipend of Rs. 1,500 per trained and placed AHW for a period of one year so that he/she can establish him/her self. This stipend should be for a period of two years in the case of the three categories of AHWs trained and placed for working – *i)* amongst the landless wage earning SCs keeping large ruminant keepers, *ii)* amongst medium and large flock owning traditional shepherds, and *iii)* in marginalised hilly tribal areas.
5. After a proper scrutiny by an appropriate committee of farmers and LCPs, a payment of financial incentives for – *i)* AI calves born, *ii)* reduction in disease incidence/outbreak, *iii)* cash awards for the best AHW at the Mandal, district and state level.
6. A cadre of the VAS, say ‘VAS i/c AHWs’, may be especially assigned in each Mandal just for support and supervision of the AHWs in that Mandal. He should be located at the Mandal level VH or VD, kept free from its other duties and provided a TA (Transport Allowance) for touring the Gopal Mitra centres in the Mandal. The VAS manning the proposed Mobile Veterinary Clinics could be an ideal person.
7. The monthly stipend amount of the AHWs should be released only after this ‘VAS i/c AHWs’ issues a clearance stating that the work of the AHW during the month was satisfactory. This would induce an element of quality control of the work of the AHWs.
8. This assessment has to be done on the basis of, a) atleast one visit by the VAS to the Gopal Mitra/AHW centre, and; b) atleast one visit by the AHW/Gopal Mitra to the office of the VAS. During such visits the following activities may be undertaken – *i)* Verification of records, *ii)* Technical back-stopping, *iii)* Issue of supplies (medicines, vaccines, semen, liquid nitrogen etc.), *iv)* Problem solving and *v)* Quality control etc. can take place.

c) Gopal Mitras in the Field:

1. The Gopal Mitra cadre has come into its own in Andhra Pradesh. This cadre has firmly established itself and is contributing to the service provision in increasing their numbers year by year and perhaps is doing the best amongst all other states of the country in this regard, if the combined experience of the Study Team members is taken as an indication.
2. This cadre has to be nurtured and allowed to grow as their functioning would be an economical extension of the doorstep livestock services even to remote areas and to the disadvantaged communities.
3. Some of the steps suggested in this report would perhaps help in the further development of the contribution of Gopal Mitras to the livestock farmers, especially to those for whom livestock is an important livelihood.
4. The performance of the trained youth (Gopal Mitra curriculum minus AI) can be improved by giving them the above recommended incentives and a free provision of vaccines and anthelmintics initially, along with cold-chain facilities for the same.

d) Vaccination of Small Ruminants & Backyard Poultry:

1. The system of training candidates from the respective societies and localities recommended above is in line with the specific needs of the three identified problem areas from service provision.
2. A proposed monthly stipend of Rs. 1,500 per trained and appointed AHW for a period of one year should be for a period of two years in case of the three categories of AHWs listed under item c) above, so that he/she can establish him/her self.
3. Vaccination and de-worming of poultry and small ruminants as well as pigs (now totally neglected) should be a priority task for such area/community specific AHWs.



INTRODUCTION

The first report of this study entitled 'Paravet Training Programmes in Andhra Pradesh' covers the various aspects of training of 'paravets' (1 or 2 year courses, to prepare candidates for posting as government paravets in AHD) and 'Para-workers' (40 to 180 days courses, to prepare candidates for placing as community-based self-supporting animal health workers) in Andhra Pradesh. This second and concluding report covers the results and discussions on the various aspects of: a) Placement of; b) Service Delivery by; c) Supplies and Support to and Supervision of the community based Animal Health Workers (AHWs).

It may be reminded that in the first report too, certain aspects of service delivery by the above cadres were discussed from a training point of view. The span and nature of the service delivery by government paravets under the supervision of Veterinary Surgeons was discussed along with their 'job charts' in the earlier report. This report primarily discusses the entire gamut of Service Delivery, Supplies, Support and Supervision of the community based Animal Health Workers (AHWs).

Because of the above, there could be some overlapping of the issues and topics discussed in the two reports. But, in the

interest of making each of the two reports totally self-contained, such overlaps may be ignored. Also this is necessary to achieve the specified OBJECTIVES of the study that are as follows:

1. To develop a clear understanding of the training provided to para-veterinarians and paravet workers by various agencies including the deficiencies and gaps in training, if any.
2. To develop an understanding of the present practise of livestock service delivery by para-veterinarians and paravet workers including the delivery of services to remote and low potential areas, the marginalised and poor communities and the over-reach, if any, beyond the limits prescribed for each category of service providers.
3. To explore the possibility of bridging the gaps and deficiencies in training, bringing clarity in the role amongst different service providers and improving the effectiveness of the services.
4. To study the technical, social and economic aspects of the institution of Gopal Mitra to help redesign the approach, structure and their training needs.
5. To develop an understanding of the facilities available for preventive

vaccination amongst small ruminants and poultry (desi), particularly in the low potential areas.

1. THE STUDY

The study was conducted in the four districts of East Godavari, Anantapur, Mahabubnagar and Nizamabad in Andhra Pradesh. Besides, the data obtained in a 2004 study by VLDA/APLDA in the three north-coastal Andhra districts covering 400 Gopal Mitras and their Supervisors was also analysed and studied. An attempt was also made to interview the tribal youth trained as AHWs by AHD and placing them in their native villages falling within the area of the Integrated Tribal Development Project, Paderu in Visakhapatnam.

The details of the all the Sample Districts/ Mandals, Sample Villages and the Farmers Interviewed, the Livestock Potential of the sample Mandals, the Agro-Climate type of the sample Mandals, the Number of Households keeping Large Ruminants, Small Ruminants, Poultry, Land ownership per Household in terms of Irrigated Land and Rain-fed land and the Service Provider Institutions in the Sample Village/Mandal, if any, though available, have not been presented in this report because of the exhaustive nature of these details. These details indicate the efforts made to cover the divergent types of areas and farmers

in this study as they occur in Andhra Pradesh.

1.1 Individuals interviewed

The effort of the study was to get the requisite data and information directly from all stakeholders, rather than basing it on reports and records. With this motto as the guide, three types of individuals were interviewed under this study:

1. Community-based Animal Health Workers (AHWs) themselves in the above four sample districts, using Questionnaire 2,
2. The farmers – the ultimate receivers of the service, using Questionnaire 3, and
3. Mandal/ALDA level local official & non-official persons concerned with the work of community based AHWs, using Questionnaire 4 (Table 4).

Details of the interviewed community-based Animal Health Workers (AHWs) and Mandal/ALDA level local official & non-official persons concerned with the work of community based AHWs are detailed in *Table 1*. Participation by those of the invited (from the entire district) individuals that participated in the interviews was purely on a voluntary basis.

Within each district, the Mandals were selected to reflect the typical trends in livestock population and the general

Table 1: Community based Animal Health Workers (AHWs) interviewed

DISTRICT WISE		CATEGORY WISE	
Ananthapur	28	BAIF_AHW (M'nagar, A'pur Dt).	8
East Godavari	28	Gopal Mitra (Above 4 Dt).	92
Mahaboobnagar	23	JKT_AHW (A'pur Dt).	5
Nizamabad	26	SR Extn Workers (Nalgonda Dt).	5
		Tribal-AHW (Visakha Dt).	3
Grand Total	115 (-2)*	Grand Total	113

Note: 1. * The two invited Sangh Mitras gave no responses; 2. Data and Information from a study on Gopal Mitras (400) in Visakhapatnam district organised in 2005 by VLDA/APLDA was also considered.

Table 2: The number of farmers interviewed

ANANTHAPUR		EAST GODAVARI		MAHABUBNAGAR		NIZAMABAD	
Mandal	No.	Mandal	No.	Mandal	No.	Mandal	No.
1. Garladinne	21	1. Kapil'warapuram	20	1. Addakal	20	1. Bekhnoor	20
2. Kalyandurg	25	2. Rajanagaram	20	2. Atmakur	20	2. Bodhan	20
3. Nallacheruvu	15	3. Rampac'avaram	20	3. Bhoothpur	20	3. Jakranpally	20
4. Pargi	20	4. Sithanagaram	20	4. Dharur	19	4. Kam'rpally	20
5. Roddam	19	5. Thondangi	20	5. Hanwada	10	5. Ranjal	20
				6. Vangoor	20		
Total	100	Total	100	Total	109	Total	100
Grand Total				409			

agro-climatic conditions, besides covering the areas served by different types of AHWs. Livestock farmers typical to the district and in proportion to their total numbers were selected for conducting the survey (Table 2).

From the same districts, various persons concerned with the AHWs and their work as stakeholders, supervisors, etc. were also interviewed (Table 3). They include veterinarians and officers of the AHD, office-bearers of the breeders' associations, elected peoples' representatives etc.

All the issues in this report would be

discussed from the view points of three types of individuals, namely, the farmers, the service providing AHWs and those concerned with the supply, support and supervision of the AHWs at the ground level.

1.2 Features of the sample households - Farmers

The samples of this study were successful in capturing all the different types of farmers from the points of view of their social backgrounds, livestock potential of the area and their land and livestock

Table 3: Concerned mandal/ALDA level officials & non-officials interviewed

DISTRICT	FEMALES	MALES
Ananthapur	1	23
East Godavari	2	10
Mahaboobnagar	3	13
Nizamabad		20
Out of which the different Categories -	Females	Males
1. AHD Officer		7
2. AHD VAS		14
3. AHD Paravet	1	21
4. NGO Officials		4
5. Elected Reps of Panchayats	5	17
6. Elected Reps of ALDA / LS Breed Assn		5
7. Progressive Farmers & Others (Wage Worker Leaders)		4
Total	6	72
Overall	78	

holding patterns. The study endeavoured to cover all categories of farmers. The general classification of the households on the basis of the land holding and social backgrounds is similar to the general trends of the same in the State in broad terms.

Large ruminant keeping (44%), wage earning (27%) and agriculture (22%) are the main occupations of the sampled farmers; a good proportion of the large ruminant keepers and a small percentage of the wage earners are also involved in agriculture. The scheduled caste households are primarily wage earners, where as the households of 'backward castes' and 'other castes - forward' are mainly agriculturists. Though most of the 'scheduled tribe' households (20) mentioned agriculture as their main occupation, it is still in a formative stage.

The differences in the features of sample farmers were also considered from Mandal to Mandal. The selected sample households cover different land holding (irrigated + rainfed) classes, i.e. from 'No land' to '> 15 acres' of land in every sample Mandal in all the four sample districts. The same is the case of the land holding patterns considered separately as 'irrigated land' and 'rainfed' land. Thus the study endeavoured to cover all categories of farmers in each district.

Only the households possessing livestock are considered for this study. All the different patterns of large ruminant holdings in each of the sample districts were covered — from 'None' to '>10' large ruminants in various proportions that are akin to the proportions in the state as a whole. Similarly, all the different patterns of small ruminant holdings in each district were also covered — from 'None' to '>100' small ruminants in various proportions that are akin to the proportions in the state as a whole.

The study has not specifically gone for a deliberate sampling of households for backyard poultry holding patterns. Naturally, the rural households keep backyard poultry only in smaller numbers

that would suit their resources and needs. This fact enabled the study, by selecting households to cover different large and small ruminant patterns, to cover households with different poultry holding patterns also - from 'None' to '>30' birds in each district.

2. ANIMAL HEALTH WORKERS (AHWS) IN THE FIELD

Profiles of the AHWs:

The average age of the AHW working in the field is 29 years with a range from 19 to 43 years. That range is actually for the Gopal Mitras. The BAIF_AHWs, the JKT_AHWs, the SR Extn Workers and the Tribal - AHWs were in their early twenties to early thirties. Bulk of them have studied up to 10th Class, about 30% till 12th Class and about 8% were either in their graduate classes or have actually graduated. Almost all of them are well conversant in the local language; 42% and 54% being proficient in Hindi and English too. The AHW was already at work for four years on an average (range 1-9 years) and covers about five villages on an average (range 1-10). The BAIF_AHW covers nine villages on an average. The village coverage by Gopal Mitras in the three North Coastal Districts is nine as per the VLDA/APLDA study of 2004.

Placement & residence:

It is essential for a community based AHW to stay right amidst the farmer clientele so that doorstep services can be provided. Hence, the actual place of work and the place of residence of the AHWs was studied. It is good to note that 76% of the AHWs reside in one of the villages actually covered by them and for 61% of the AHWs, the working village is their native village too. Also, almost all of them stay and work in the same Mandal. The percentage of AHWs living and working in the same village was 80% in case of the BAIF_AHWs, 73% in the case of Gopal Mitras and 100% in case of the JKT_AHWs, the SR Extn Workers and the Tribal - AHWs. This augurs well for effective service delivery.

Mobility of the AHWs:

Nearly 76% of the Gopal Mitras, all the NGO_AHWs and none of the Small Ruminant Extension Workers and Tribal AHWs possess and use a moped/motor cycle/bicycle for service delivery. Most of them had acquired such vehicles between 2000 and 2005, 40% of them by taking a vehicle loan for the same. And almost all of them have either paid back such loans or are still paying them off in instalments.

For the AHWs of BAIF, JKT and RASS such vehicles were provided by the organisations. Often they use other means of transport as well (apart from their own vehicles) such as public bus, an autoriksha or a bicycle. The AHWs travel for about 124 kilometers per week spending Rs. 294 for the same. Similar travel distances are 430, 103, 284, 0 and 0 kms per week, spending Rs 554, 304, 356, 120 and 60 in the case of BAIF_AHW, Gopal Mitra, JKT_AHW, Small Ruminant EW and Tribal_AHW, respectively.

Thus, while the AHWs seem to be reasonably mobile, the service delivery by them involves considerable overheads on travel itself, not to speak of medicines, etc.

3. OUTREACH OF THE ANIMAL HEALTH WORKERS

Presented in *Table 4* below is a comprehensive comparative statement of the various features of service delivery by different categories of AHWs.

Gopal Mitras and the AHWs of BAIF and JKT are the primary providers of AI service at the doorsteps; but they also provide other basic services. AHWs of RASS are unique in that they provide all of the services listed above besides helping in organising the production and marketing aspects also by the women Self-Help Groups, albeit in just three Mandals of Chittoor district as employees of the NGO RASS. Amongst all of the community-based AHWs, the required admission qualification for RASS_AHWs

is 12th Class; this being the case with another course — the 2_year Veterinary Assistant's programme. The AHWs of Girijan Deepika (trained by ANTHRA), Sangh Mitras and Tribal AHWs provide basic livestock services barring AI. Small Ruminant (formerly Sheep) Extension Workers and Women Poultry Extension Workers provide the basic services to the species for which they were trained. Unfortunately, the Sanghamitras and Women Poultry Extension Workers are said to have mostly gone out of business due to a lack of patronage and meager incomes.

Veterinary Assistant and Vet Poly-Technique programmes are entirely different type of programmes — 1 or 2 years long and for the preparation of paravets to be absorbed into the government service. Because of the diverse duties that these trainees have to perform and by necessity, they are trained in greater depth on a wider range of topics and their duties are also different. Hence these government paravets cannot actually be compared with those of the community-based AHWs with regards to the services that they provide.

In the following sections, the views of the three groups of people concerned with the service delivery of AHWs, namely — the AHWs, the Farmers and the Local Concerned Persons will be discussed in greater detail for individual services.

4. SERVICE DELIVERY - VIEWS OF THE ANIMAL HEALTH WORKERS

Although, the details of the livestock population covered and the extent to which different services were provided during 2004-2005 by different types of AHWs are available, these have not been presented in this report because of their exhaustive nature. These details however lead us to conclude that the contribution of AHWs to the provision of livestock services, almost invariably at the farmer's doorsteps, is considerable. Also this contribution is increasing over the years.

Table 4: Comparative details of service delivery by different categories of AHWs

TYPE OF AHW	USER FEE	CRITICAL COMPONENTS	SERVICES PROVIDED
Gopal Mitra	Yes	AI service at doorstep	AI service at doorstep, First Aid, vaccination, deworming and liaison between farmers and AHD
Tribal Youth AHW	Yes	First aid, vaccination & deworming	First aid, disease reporting in tribal area
Sangh Mitra	Yes	First aid, vaccination & deworming of SR	Same, focus on sheep and goats
SR Health Workers	Yes	First aid, vaccination & deworming of SR	Same in sheep and goat – also spraying animals and sheds against ticks, extension, marketing assistance – weighing animals, keeping growth records, market trend info
ANTHRA's AHW	No	Ethno-vet practices; for marginalised areas & communities; also in other areas now;	Community -based AHW; Women workers in the main; First Aid, vaccination, deworming; Fodder/ Grazing Dev., Poultry; use of local + modern practices in feeding, fodder dev., grazing; improving local breeds; improving management & housing;
BAIF AI Technician	Yes	AI service at doorstep	AI service at doorstep, preventive vaccinations, deworming, Fodder Development
JK Trust AI Technician	Yes (AI); No (Other)	AI service at doorstep	AI at Doorstep, first aid, preventive vaccination, Deworming
RASS Primary Health Worker	No	AI service at doorstep	AI at doorstep , first aid, preventive vaccination, poultry development
Veterinat Assistant	Placement dependent	Assistance to Vets in various services*	Multiple role – vet assistant, pharmacy asst, lab assistant etc
Vet. Polytechnique	Placement dependent	Assistance to Vets in various services,* Independent charge of rural AH institutions*;	Multiple role in advanced mode – also carries out Pet and Zoo Animal management, Meat Production & Handling, Veterinary Pharmacist, Feed Analytical Lab Assts, basic Veterinary Surgery, Diagnostic Lab Assistant, Biologicals and Vaccine production assistance;

Table 5: Performance of Gopal Mitras (2003-2004)

(As per APLDA records) Average per year per Gopal Mitra

DISTRICT	No. OF G'MITRAS	TOTAL AIs PERFORMED	AVG. AIs/ G'MITRA	BEST BY A G'MITRA
Ananthapur	103	10,865	105	624
East Godavari	107	27,343	256	971
Mahbubnagar	59	7,108	120	633
Nizamabad	92	5,267	57	616
Three- north coastal districts	96	33,041	344	1,301
Total AP	1,713	285,556	167	*2,601

* This was in Srikakulam district of Andhra Pradesh.

Given below is a comparison of AHWs in this regard, to the extent possible. The position regarding the services provided by AHWs, AI in the main, is as follows.

A. GOPAL MITRAS:

The performance of Gopal Mitras (2003-2004) as per APLDA records are furnished in Table 5

B. By NGO BAIF AHWs:

Over four years (2001-2004), around 50 AHWs are in operation in Ananthapur, Karimnagar, Mahbubnagar, Nalgonda and Warangal districts - Average per year per AHW = 948 AIs.

C. By NGO RASS AHWs:

(Chittoor District), Over 3 years (2001-2004), 8 AHWs, 3 Mandals, 34,000 Households, 70 Women Dairy Coops - Average per year per AHW - furnished below:

Cases Treated	6,920	Calves Born via AI	167
De-wormings Done	912	Extension Camps (for Farmers)	2
AIs Performed	422	Health Camps (for livestock)	1

D. By JK Trust AHWs (Chittoor & Ananthapur Districts, 150 Centres, from 1998-2004) - Average per year per AHW -

furnished below

First Aid Cases Treated	598	Calves Born via AI	169
Infertility Cases Treated	147	Dewormings Done	698
AIs Performed	359	Vaccinations Done	1,215

E. The AHWs of tribal area

Tribal Area - Present Study Findings

- Only 3 of the 29 Tribal Youths specially trained for the Visakha Tribal Area are 'working'.
- They complain of non-patronage, low income and low confidence.
- Expressed that the farmers do not prefer Jersey semen, as they do not like the appearance of cross breeds.
- There is also the problem of scrub bulls.

Reasons:

- Low priority of livestock keeping for the tribals.
- Very limited scope by tribals to pay user charges.
- Inability of the trained youth to advertise themselves.
- Difficulties in mobility in hilly terrain and widely dispersed villages in the interiors.

F. VLDA/APLDA Study in North Coastal Andhra Districts: Performance of 400 Gopal Mitras

DISTRICT	BREEDABLE BOVINES PER GM	AIs / GM / YEAR	*AVG. INCOME / GM / MONTH	MODE OF TRAVEL BY GM (%)			DISTANCE COVERED / GM / MONTH (KM)
				Cycle	Bike	Bus	
Vishakapatnam	1546	370	Rs. 600	47.87	49.30	2.83	477
Vizianagaram	1416	273	Rs. 934	83.30	12.96	3.70	491
Srikakulam	1625	323	Rs. 830	44.07	55.35	3.57	646
Average	1529	321	Rs. 788	57.06	39.67	3.26	538

* This is only from AI. GM earns Rs 1200 / month from other services provided.

Comparison of AIs Performance by AHWs as Elicited from Different Sources (Average number of AIs performed per AHW per year (2003-2005) are presented above :-

1. As per APLDA Records - AIs/Gopal Mitras/Year 167
2. As per Gopal Mitras themselves (Cows = 129; Buffaloes = 245) 374
3. As per BAIF Report (with APLDA) 948
4. As per BAIF AI Technicians themselves (Cows = 406; Buffaloes = 373) 779
5. As per RASS Records 422
6. As per JKT Report (with APLDA) 359
7. As per JKT AI Technicians themselves (Cows = 354; Buffaloes = 481) 835

Range = 167 to 948; Probable Mid-Value = 558; Potential - at least 500 / year / AHW

An attempt was made to compare the AI service provided by Gopal Mitras and AI Technicians of NGOs BAIF and JKT in Anantapur district, the only district where all the three of them operate (Figure 1). It appears that Gopal Mitras are lagging behind the other two types of AHWs, although they were showing a trend of improvement over the years.

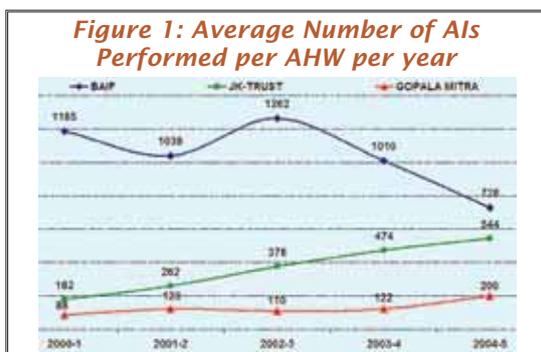
However, this difference has to be seen in comparison to the conditions under which the three types of AHWs operate (see Figure 1 and Table 6 given below). Note how disadvantaged is the Gopal Mitra in his work in comparison to the others.

Table 6: Comparison of the Conditions of Work of the AHWs in Anantapur Dist. (2000 to 2005)

CONDITIONS	GOPAL MITRA	BAIF AI TECH.	JKT AI TECH.
Provision of vehicle	No	Yes	Yes
Provision of fuel	No	Yes	Yes
Main Work Area	Villages	Suburbs*	Both
Free service	No	No	No
Incentives	No	Yes	Yes
Stipend	No	Yes	Yes
Working since	2000-1	< 2000-1	< 2000-1
Supervision	General	Specific	Specific
Supervisor	Nearest VAS	Special Supervisor	Special Supervisor

*Breedable cow / buffalo density high; now spreading to interior areas.

Note: Government of Andhra Pradesh supports BAIF & JKT AI Services financially.



Also, the present potential of an AHW is to cover not less than 500 breedable bovines, whereas the present (2004) population of breedable bovines in the villages covered by an AHW is 1600. Thus the coverage is still around 1/3rd of the breedable animals.

There is a need for improving the coverage to 100%. An AHW is providing basic services, on an average, in an area of five villages covering a population of 828 cattle, 1,447 buffaloes, 4,749 sheep, 1,023 goats, 197 pigs and 3,062 poultry per year.

5. SERVICE DELIVERY - VIEWS OF THE FARMERS

5.1 Profile of the Farmers

Opinions of 409 farmers from different social backgrounds and primary occupations (Figure 2) across the four districts were also obtained on how they perceived the quality of the services provided by the AHWs already working in the field. The idea was to see what bearing does their training have on the outreach and over-reach of AHWs. For this purpose, mandals with different levels of livestock potentials and agro-climatic conditions were included in the sample within the four districts. The features of the sample households are discussed in 2.2 above.

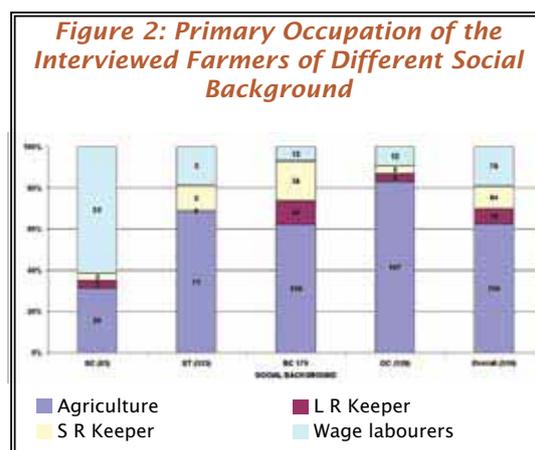
5.2 Farmers' Views on the Quality of Services

It can be safely said that, amongst the services studied, the quality of service-wise, three categories emerge

- a) 'AI', 'First Aid', Vaccination' and 'Deworming' whose quality was felt to be mostly better by the farmers; b) 'Livestock Management Advice', 'Fodder Development', 'Castration' and 'Use of Local Medicines' whose quality was felt to be inferior by the farmers; and c) the 'Other' - Organisation of Health Camps brought up by the farmers themselves under 'Other services' and for which they felt that the AHWs are not up to the task. The details of the recorded opinions and the differences across different possible influencing factors are as follows:

5.2.1 District Wise Differences:

The extent of 'Very Good' and 'Good' coverage, in the farmers' opinion, for provision of AI service was about 45% as a whole, ranging from 30% in Nizamabad district to 70% in Ananthapur district. Similar percentage responses for first aid were 70% and 50% to 85%, for vaccination were 70% and 53% to 81% and for deworming - 52% and 48% to 60%. The lower percentages for coverage of AI may be due to the higher levels of skill required for the same, which the AHWs might not have yet mastered.



However, higher levels of AI coverage seem to be in Ananthapur district, a drought-prone zone, more known for small ruminants. Surprisingly, the lowest level was in Nizamabad district with higher number of breedable bovines. Maybe, the greater importance of large ruminants in livelihood (crossbred cows

being the most common asset provided under the various schemes) and a healthy competition amongst the three types of service providers - Gopal Mitra, BAIF and JKT, is leading to the better overall coverage. More or less, similar trends are seen in case of the other services too. The generally lower coverage in the agriculturally developed East Godavari district could be the result of the more endowed farmers seeking the services of doctors rather than of the AHWs and also the naturally lower AI success rate in buffaloes, the more predominant bovines in this district.

But 'Very Good' and 'Good' coverage of the other services - 'Livestock Management Advice', 'Fodder Development', 'Castration' and 'Use of Local Medicines' are generally low - below 40% in all the districts - indicates the need for more attention to these in future training programmes.

5.2.2 Differences of Different Livestock Potential Levels amongst the Mandals:

All the Mandals in Andhra Pradesh were classified for their Livestock Potential in a big study sponsored by the former ISPA, Hyderabad (Bovine Sector Study, 1991-2, carried out by ISPA, ASCI, CESS, NIRD & ANGRAU); the present author (Sastry) was a part of the team that carried out that study. This 'potential' score considered the livestock density, the net sown area, availability of feeds and fodder, amongst other things. From amongst the sample Mandals of the present study, there were - one 'Very High', eleven 'High', four 'Medium', three 'Low' and one "Very Low" potential Mandals. Thus, the present study tried to see the quality of the services provided by the AHWs in areas with limited livestock potential also; the so called marginalised areas.

A very high percentage of farmers (70 to 85%) of the 'Very Low' potential Mandals (hilly, tribal areas) opined that either the AHWs have 'Not Done' any service or the quality of all the services provided by them was 'Not Good'. This is mostly in the hilly, tribal areas where the distances

were great, the accessibility was difficult and the farmers were still under transition from purely tribal to the livestock rearing type.

But 45 to 77% of the farmers of the 'Low' potential Mandals felt that the services provided by the AHWs was 'Good' or even 'Very Good'; especially good seemed to be the quality of 'First Aid', 'Vaccination' and 'Deworming' services and 'AI' being moderately good. Such 'Low' potential Mandals turned out to be the most successful terrain for AHWs; the animals being more important to the perhaps financially not so well endowed locals for livelihood. Farmers of the 'Medium' and 'High' potential Mandals were, in general, the next best in satisfaction level with the services of AHWs.

Surprisingly, the satisfaction level was as low as 22% for most services in the 'Very High' potential Mandals; this being a Mandal in the rich Godavari Delta regions, the farmers possessing high valued and better quality animals might be preferring less services from the AHWs and more from the doctors (even private).

As seen already, a high percentage of farmers (55 to 82%) across Mandals of all potential felt that the provision of service was either 'Not Good' and 'Not Done' for the services - 'Livestock Management Advice', 'Fodder Development', 'Castration' and 'Use of Local remedies in all the districts, again indicating a need for more attention to these in future training programmes.

5.2.3 Differences Amongst Mandals of Different Agro-Climatic Conditions:

As per the Indian Council of Agricultural Research, delineation of the different agro-climatic sub-regions of AP (NART, ICAR, New Delhi, 1990) and the verification by this study, agro-climatic condition-wise, eight sample Mandals were 'Marginal', eight were - 'Average' and five were - 'Good'. As can be seen from the presented figures, there does not seem to be much of a difference amongst the three types of areas with respect to the perception of farmers about the quality of different services provided by the AHWs.

5.2.4 Differences due to the Primary Occupation of the Farmers:

The satisfaction of the farmers with the quality of 'AI' services provided by the AHWs seems to be highest amongst farmers with 'Agriculture' as their primary occupation, followed by 'Large Ruminant - Keepers', 'Small Ruminant - Keepers' and 'Wage Labourers'. As mentioned at the beginning of this section, a majority of the SCs are the 'Wage Labourers', who opined that 'AI' (68%) and 'Deworming' (55%) were either 'Not Done' or were 'Not Good'; the other services being even more unsatisfactory for them. Thus, the task of the planners is to see that the AHWs definitely reach out to the daily wage earning livestock keepers.

5.2.5 Differences due to the Social Backgrounds of the Farmers:

The general trend of satisfaction levels of the farmers with the services provided by the AHWs was: a) highest for livestock keepers of 'Other' castes, of whom 82% are agriculturists; followed by b) 'Backward Castes', of whom 62% are agriculturists and 12% are small ruminant keepers; c) 'Scheduled Tribes', of whom 69% are agriculturists, albeit small, and 9% are wage earners; and d) 'Scheduled Castes', of whom 60% are daily wage earners and 32% are small-scale agriculturists. This trend is manifested in all the services provided by the AHWs. Thus, neglect of the wage earning scheduled caste households with respect to the provision of livestock services is definite and disturbing.

5.2.6 Differences due to the Main Service Providing Organisations:

The sample Mandals were selected in such a way that the operational areas of the main livestock services providing organisations in Andhra Pradesh were covered, in the best possible way. It should be remembered that such areas are not exclusive to the named organisation, but it is the main service provider, as the AHD has let certain NGOs and Gopal Mitras to operate in certain villages/areas. It should be further noted that, any farmer from the operational area of a given service

providing organisation always has the option of seeking services from some other service provider, even from outside that area, which many farmers often do.

For example, in the operational villages of NGO Girijan Deepika (GD) in the hilly, tribal region in the East Godavari district, whose AHWs were trained by the NGO ANTHRA, one farmer had his animal artificially inseminated by some one else, as the AHWs of GD are neither trained nor expected to provide AI services. In this particular area, perhaps due to the lower density of the workers or their limited mobility or ability or a combination of all the three factors, coupled with the low intensity of livestock production and greater poverty in the region, almost all the services were 'Not Done' as per the opinion of more than 70% (64 to 88%) of the farmers.

The study team feels that there is a definite need for a special in-depth study of the marginalised, hilly, tribal regions of Andhra Pradesh spread across seven districts for evolving livestock development strategies appropriate to the local conditions and needs. It is thus difficult, from a general study to get precise information on the specific problems of this region that would enable us to plan special strategies accordingly.

As regards the AI, 40 to 45% of the farmers opined that the service was 'Very Good' and 'Good', the difference between the service provider organisations being marginal with the exception of the NGO JKT. While the performance of the workers of the NGO BAIF and the Gopal Mitras were more or less similar (around 45%) to that of the RLU (Rural Livestock Unit) headed by a government paravet and the VD (Veterinary Dispensary) headed by a veterinarian, the workers of the NGO JKT gave satisfactory services as per 75% of the farmers. Thus, as regards AI, while there was not much of a difference between different service provider AHWs and organisations, the services of the JKT were the most appreciated ones.

Except in the tribal area covered by the NGO - Girijan Deepika (for reasons mentioned above), there are practically



Livestock service for large ruminants are easier to get than for small ruminants, poultry or pigs

no significant differences in their satisfaction levels for other services amongst the different AHWs and the AHD institutions; only the AHWs of the JKT seem to be better in providing 'First Aid' and 'Vaccinations'.

5.2.7 Differences in Services Amongst Different Land Holding Classes:

The opinions of the farmers of different land holding classes on the quality of livestock services provided by the AHWs are simply revealing. Both the 'Not Done' and 'Not Good'; responses of the farmers for all the services were highest (60 to 80%) in case of the landless livestock keepers (who are generally the poorest) and decrease as the land holding size of the farmers increases; 60 to 80% of farmers with more than 15 acres of total land holding saying that the services provided were 'Good' and 'Very Good'.

5.2.8 Differences in Services Amongst Small Ruminant Holding Classes:

The study also tried to look into the service patters of farmers possessing different sizes of small ruminant flocks. Farmers of 'None' small ruminant classes are virtually those who keep only bovines. Farmers of '<10' small ruminant classes are generally only keepers of goats for mainly supplementary income. The AHWs were providing reasonably satisfactory services to these categories of farmers. But as high as 65% (40 to 85%) of the '50-100' and '>100' categories of small

ruminant keepers, who are invariably traditional shepherds, felt that the services were not provided ('Not Done) by the AHWs or they were 'Not Good'. Thus, the traditional shepherds, especially those not having big flocks, seemed to be at a disadvantage; more so because, the deprived services included crucial vaccination and deworming.

5.2.9 Differences in Services Amongst Backyard Poultry Holding Classes:

Similarly, the study also tried to look into the service patters of farmers possessing different sizes of backyard poultry units. As compared to small ruminants, the 'Vaccination' and 'Deworming' services provided by the AHWs to birds across different backyard poultry units were better as per poultry keepers. 'First Aid' and especially 'Management Demos' (Extension services) were rather unsatisfactory.

5.2.10 Role of the AHWs in Organising Health Camps:

This particular activity was not originally included as a service to be provided by the AHWs, at least in the study area. But, wherever an option "Any other" was given to the farmers, the local concerned persons and even to the AHWs, invariably the 'organisation of Health Camps' cropped up as an important activity/service. This, and in-view of the findings of an earlier study (Sastry, 2004), this aspect was also studied. The conclusion that can be drawn from the trends is that, although everyone feels that the organisation of health camps is an important service to the farmers' animals, such camps are not very frequent as of now. But this 'service' may be seriously considered in all of our future plans as this is actually a medium for providing a gamut of quality services to a large number of farmers periodically at least.

5.3 Usage of AI service by the farmers

Before we consider the views of the farmers on the quality of the AI by the AHWs, it would be appropriate to first know the

extent of their usage and related personal experiences.

5.3.1 Usage of AI service by Farmers:

About 70% of the sample households have not used any AI services at all. This value is almost 95% in case of the low and very low livestock potential areas. There is no difference in this regard between the Mandals with a high or low livestock intervention levels, nor does there seem to be much of a difference with regards to AI usage amongst Mandals of different agro climatic types – the AI usage rate remains at around 35 % in general.

Amongst the irrigated land holding classes, the AI usage is as high as sixty five percent in case of the class possessing more than six acres of irrigated land. The usage level decreases as the irrigated land holding size decreases to a low of 25% AI usage in households with no irrigated land. The trend is similar in the case of the the rainfed land holding classes as well; only the magnitude is smaller by about 10%.

The AI utility percentages was 30% in households with less than three large ruminants, the usage increases up to a level of 48% as the number of large ruminants held increases. Amongst the small ruminant holders, those possessing less than 10 small ruminants are generally the goat keepers with some bovines, those possessing more than ten small ruminants are mainly the sheep keeping (with some goats) traditional shepherds. The usage of AI amongst such small ruminant households is the lowest (12%)



Farmers earnestly look forward to support by paravets for vaccination and de-worming of their small ruminants

for those keeping more than 100 small ruminants. The rate of usage increases with a decrease in the number of small ruminants held.

The above data indicates, that in general, the usage of AI is around 30% only and it becomes lesser as the household asset level decreases, i.e. no land, fewer large ruminants or amongst the traditional shepherds. This clearly indicates that there is a great scope to increase AI coverage amongst the poorer households. These trends of coverage remain more or less similar, irrespective of the category of service provider namely a veterinarian or a paravet or an AHW.

5.3.2 Farmer's level of satisfaction with AI services:

Practically there is little difference in the satisfaction level of the farmers (from different types) with AI services. That is said to be a 'good' situation. But the satisfaction level is about 15% higher when the services are provided at the doorstep as compared to their provision at a centre.

5.3.3 Pregnancy with AI:

Amongst those who used AI services in the previous year, 85% reported that the AI resulted in a pregnancy, which is quite satisfactory. Before we consider the views of the farmers on the quality of the AI by the AHWs, it would be appropriate to first know the extent of their usage and their related personal experiences. There is not much of a difference in the extent of its usage or related personal experience between the areas with different livestock potential amongst the land holding classes or amongst large ruminant holding classes or due to different service providers.

The pregnancy rate, if at all, seems to be somewhat better when AI is done by the AHWs as compared to that done by the vets and paravets. Performing AI at the doorstep means performing AI at the appropriate time, at the time of heat which could be the reason for the pregnancy rate to be higher by about 12%, when AI is done at the doorstep as compared to that done at a centre.



Timely diagnosis of pregnancy of their milch animals is of high economic value to the farmers

Thus while the picture emerges is that the pregnancy rate with AI is quite high, the AHW achieves still a somewhat higher level, mainly because of the fact that the AHW provides services at the doorsteps thus succeeding more in inseminating at the right time of the heat period.

5.3.4 Reasonability of the charges for AI services:

As high as 90% of the farmers are satisfied with the charges that they are paying for the AI services. The remaining 10% of the farmers that are not satisfied with the charges are those with no land, or those who possess fewer large ruminants, or those in low-livestock potential areas. It may be noted that about 27% of the farmers felt that the charges demanded by Gopal Mitras are not satisfactory. The satisfactory level towards the charges of AI was 10% higher when AI is performed at the doorsteps.

The above findings indicate that the farmers' level of satisfaction with AI services as well as the charges for the same are based not only on the quality of services that they receive, but also on how convenient it is for them to obtain these services. There is also a trend of a lesser usage of AI amongst SC and ST households, a little better amongst the backward castes and the best amongst other castes. The accessibility of the poorer households to different service providers also seems to be less.

5.3.5 Number of AI Services per Pregnancy:

In about 59% of the cases, pregnancy occurred with just once service, in 32% cases with two services and the rest with three services. It may be noted that in very high potential areas, pregnancy occurred in 80% cases with just one service. There is not much of a difference in the trends of services per pregnancy amongst areas with different agro-climatic conditions, large ruminant holding sizes and the place of provision of the services. But amongst animals of the landless households, only 50% cases reported a pregnancy in one service, which increased to 70% in those possessing 8 to 15 acres of land. It also emerges that the percentage of pregnancy with a single insemination was some 5 to 10% higher when done by the AHWs as compared to the service by others. The farmers expressed their satisfaction obviously based on the pregnancy rate and the number of services required for the same.

It is likely that a better nutrition status available in higher livestock potential areas and in higher land holding households results in a better conception with AI. The AHWs seem to be providing similarly satisfactory, if not better, AI services as are by the more qualified service providers.

5.4 Usage of vaccination services

5.4.1 Vaccination Usage in the Previous Year:

According to the farmers, just about 20% of them utilised vaccination services for their animals during the previous year. The situation seems to be somewhat better where the main service providing institution is the NGO-JKT (31%) and the Govt. Rural Livestock Units (20%). 25% of the households keeping large ruminants used vaccination services, while 13% of the small ruminant keepers and 7% of wage labourers households did so. The utilisation percentage is much lower amongst the landless and the scheduled caste households. Within the large ruminant holding households and within

the small ruminant holding households, there is very little difference due to their size of herd/flock – the usage being below 20% amongst all of them.

5.4.2 Reasons for the Non-Utilisation of Vaccination:

Since as many as 80 percent of the farmers are not utilising AI services, an attempt was made to know why they are doing so? It is evident that a lack of knowledge about the vaccinations (about 45%), non-availability of a vaccinator (about 30%) and non-availability of vaccines (about 18%), were the main reasons for the farmers not utilising the vaccination services. This problem is universal, albeit with different magnitudes, irrespective of who the main service provider for the village/Mandal is. The situation seems to be much worse in Mandals with a lower livestock potential, amongst small ruminant keepers and in general, amongst poorer households with no or small land and livestock assets. It is surprising to know that about 32% of the traditional shepherds holding 50 to 100 sheep feel that vaccination is unnecessary. Still distressing is the fact that the factors that can easily be got rid of by proper extension and proper supplies (no vaccines) and manpower deployment (no vaccinator) are the main reasons for the poor utilisation of vaccination services, especially by the poorer households.



Animal Health Workers reach out to the farmers to extend preventive health care

5.4.3 Number of Times the Vaccination Services are Used:

A majority (70%) of those who used vaccination services during the previous year used it just once and 25% used it twice. This trend is more or less similar amongst all farmer categories and types of areas.

5.4.4 Species of Animals Vaccinated:

Nearly 75% of the animals vaccinated were bovines, and the remaining were small ruminants. Under large ruminants, local cattle (21%) and local buffaloes (27%); and amongst the small ruminants sheep (18%) were the main animals vaccinated. Vaccination of small ruminants suffered the most in hilly tribal areas. The coverage of small ruminants is substantially higher with the small ruminant keepers.

5.4.5 Types of Vaccinations:

Vaccinations against the Foot and Mouth disease (55%), HS (10%) and BQ (4%) were the main vaccinations. About 7% of the farmers did not know against which disease their animal were being vaccinated. Only a small percentage of the vaccinations were against sheep diseases like PPR, SP and ET. A lack of knowledge about the type of vaccination amongst farmers was higher in the low livestock potential hilly tribal areas and amongst STs. AHWs of BAIF, JKT and the Gopal Mitras are covering all the diseases, however low may be the coverage rate.

5.4.6 Person Who Actually Conducts the Vaccination:

The veterinary doctor – Government or Private (58%), followed by Government Paravet (10%) and AHWs in that order, are the persons who are said to be the actual service providers according to the farmers. But wherever the AHWs were the main service providers, it is they who actually carried out the vaccination, especially in low potential areas, for small ruminant keepers and for SCs & STs.

5.4.7 Place of Vaccination:

In an overwhelming 78% cases, the vaccinations were performed at the

doorsteps, more so by AHWs of NGOs and the Gopal Mitras. Fortunately, this seems to be the case everywhere and for every species and category.

5.4.8 Poultry Vaccination:

The picture with regards to vaccination of the birds kept in the backyard units is simply pathetic. The farmers said that only just 5% of such birds are vaccinated.

5.5 Farmers' views on disease incidence & treatment

While interviewing the farmers to seek their opinion on the existing animal health care services, an attempt was also made to understand their awareness of the disease problems in their villages and households. Towards this end, the farmers were asked to share their personal experiences about the disease problems in their own words. The farmers answered in Telugu language using the local terms for different diseases. The same were translated into English, classified into broad groups and their trends were analysed. The discussions that follow below are based on the analysis of their responses.

5.5.1 Local Disease Scenario:

When interviewed about the various aspects of the livestock disease incidence and the actual clinical treatment, the farmers came out with very knowledgeable views based on their long experience. They have a clear idea about the health problems of their livestock. According to the farmers, the biggest local disease problem, both with large and small ruminants is the Foot and Mouth disease (about 40%). HS & BQ (21%) are the next most important diseases of bovines. The remaining 20% comprises of a series of general ailments. In case of small ruminants, HS (12%), Diarrhoea (10%), BQ (8%), ET (8%), Pox (6%) and PPR (4%) are some of the other important diseases. According to the farmers, out of the 534 cases of animals got treated during the previous year, 25% were with contagious systemic diseases, 17% had fever chills,

10% were in the non-specific general illness group, 9% were anorexia, the remaining being joint problems, injuries, gastro-intestinal problems and parasitic diseases. The farmers informed that the biggest disease problem with poultry is RD (58%), followed by Pox (34%).

Thus, the farmers have a good idea about the prevailing disease situation and their precise service needs. The above observations also emphasise a great need for the preventive vaccinations, which as discussed earlier, seems to be not so well organised yet.

5.5.2 Usage of AHWs Services for Treatment:

In general, only about 60% of the farmers said that they got their animals treated by some service provider or the other; this figure being a high 90% in Ananthapur district. The percentage of farmers getting their animals treated, depending on their main service provider, are as follows: JKT (95%), RLU (70%), BD (60%), Gopal Mitra (40%) and just 5% in the hilly tribal areas where NGO Girijan Deepika (trained by ANTHRA) AHWs. The service for treating sick animals is just 5% in very low livestock potential areas and low (50%) in the case of small ruminant keeping and wage labourer households, in comparison to that for large ruminant keeping households. The SC and ST households also seem to be at a disadvantage in this regard, whereas the percentage of households covered increased from just 42% in the landless households to a high of 72% of big landed households.

Thus, though about 60% of the households are utilising clinical treatment services, this percentage falls sharply in case of the landless wage earners, small ruminant and ST households especially in the low potential marginalised areas.

5.5.3 Visits by and to Farmers for Clinical Treatment of Animals:

Around 20 to 26% of the farmers take their animals to a government institution for getting their animals treated. Though AHWs, AHD employees as well as traditional healers, do visit the farmers



Catching up with the herds on the move for service delivery is the toughest

for treating animals, such visits are few and far between (about 2 per house hold in a year). Such a low number of visits by various service providers to the farmers' households indicates that the desired doorstep delivery is still a far cry.

5.5.4 Reasons for Low Use of Treatment Services:

An attempt was also made to know why those (40%) farmers that have not used the services provided by the AHWs for getting their animals treated did not avail them. It seems that nearly 40% of them did not use these services because they never had any disease problem. About another 30% of them felt that the AHWs may not be of help and that the services of a proper veterinarian were needed. About 25% could not give any specific reason for not utilising such services. However, just about 1% of the farmers said that they were unable to pay the service charges (16% in Ananthapur) and felt that the AHWs were not good enough.

5.5.5 Delivery of the Services:

From 38 to 60% of the farmers said that it was the Government veterinarian who actually treated their animals, followed by another 5% who went to a private veterinarian. The next important person who actually delivered the services was the Government paravet (12 to 20%), followed by the Gopal Mitra (10 to 20%). Though the percentage of cases treated by the AHWs was somewhat higher (about 24%) in areas where the BAIF and the JKT were the main service providers, it was the Government veterinarian who treated a majority of

the diseases - 60 to 65%. Primacy of the qualified veterinarian in treating the sick animals is sustained for all categories of farmers and in all types of areas. Next in importance are the Government paravets followed by the AHWs.

5.5.6 Ability of AHWs:

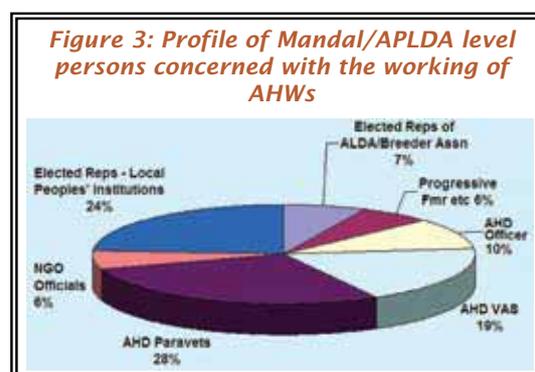
Except in the very low livestock potential, hilly tribal areas, only about 50% of the farmers (30 to 60%), felt that the AHWs could treat their sick animals successfully. The general trend of lower satisfaction with service amongst the landless, the wage labourers and the ST farmers is also evident.

5.5.7 Medicines and Place of Services:

Amongst the farmers whose animals were treated successfully by the AHWs, 60% of the farmers said that the AHWs prescribed medicines to be purchased from the market while 35% of them provided the medicines while treating. There were only marginal differences in this respect between different categories of farmers and between different areas. It was also observed that in 50% of the cases (25 to 65%), the services were provided at the doorsteps of the farmer. This percentage rose to 60% in places wherever an AHW of any organisation was the main service provider. Only in case of small ruminant keepers, this percentage went down to 40%.

5.5.8 Farmer Satisfaction with the Services:

More than 90% of the farmers from different categories and from different areas said that they were satisfied by the



treatment services provided by the AHWs. Similarly, albeit in 70% cases, was the satisfaction level of the farmers with the cost of services that they paid.

6. SERVICE DELIVERY - VIEWS OF MANDAL/APLDA (LCPs)

To know the actual performance of the AHWs, both trained and already working in the field, an attempt was made to interview those officials and individuals who were concerned with the work of the AHWs as technical supporters, supervisors, observers or leaders of stakeholders at Mandal and/or ALDA level – the so called Local Concerned Persons (LCPs). Such persons were concerned with and in close acquaintance with the day-to-day working of the AHWs (Figure 3).

6.1 Profiles of LCPs

It may be asked why the views of the so called LCPs were being considered. Their views were being considered because all of them were concerned directly or indirectly with the working conditions and the performance of the AHWs. Let us see who they were and what they did. Interviewed were 72 men and 6 women, whose average age was 43 years (range: 33 to 58) and that they were well experienced. Who they were could be seen in Figure 3; half of them being technical persons. As high as 60% of them were government officials etc. concerned with the work of AHWs, 33% were elected people's representatives and the rest associated themselves with the AHWs voluntarily.

They met about 630 livestock farmers on such visits and also attended AHW related meetings 2-3 times a year. Their visits to the AHW villages came about either due to a planned programme or due to the calls by the AHWs themselves (37% instances). As high as 80% of them opined that the works of the AHWs were being supervised well.

It was also observed that Disease Outbreaks (12%), Input Supplies (10%), Fund Position (9%), Organisation of

Health Camps (9%), Farmers' Issues (8%), Technical Issues (6%) and Supervision (6%) were the top ranking issues discussed by them at the AHW affairs related meetings. It could also be seen that the issues related to diseases and techniques ranked higher in the views of AHD's Officers, Vets and Paravets; whereas farmer related issues and plans plus issues related to funding seemed to be more important to the Elected Representatives of Panchayats (five of whom were very active women), Elected Representatives of ALDA and Breeders' Societies and others. (Panchayats = Village Level Self-Governing Local Bodies).

Thus, the LCPs are crucial people who could give valuable inputs for considering the present and the future of the AHWs.

6.2 Views of LCPs - Qualitative aspects

The order of satisfaction in respect of the various individual services being provided by the AHWs in the field as per the above-mentioned local concerned persons could be grouped as follows: a) Top Half of the services: only around 5% saying 'Not Done' or 'Not Well Done' in that order and b) Bottom Half of the services: as many as 20 to 40% saying 'Not Done' or 'Not Well Done' also in that order. The Top Half of the services in their descending order in respect of the quality of delivery were Vaccinations, Deworming, AI and First Aid, which may be considered as the service in which the AHWs are quite skilful and are doing a satisfactory job. Similarly, the Bottom Half of the services in their descending order of quality of delivery were Fodder Development, Castrations, Livestock Management Advice (Extension services), Use of Local Medicines and Organisation of Health Camps.

The topic 'Organisation of Health Camps' emerged as an important one. The working AHWs, the local concerned persons as well as the farmers (albeit about 30-40% of them) have consistently mentioned this topic under the option 'Others' provided to them. Sastry (2004) in his pilot study has brought out that Health Camps are

becoming important service innovations because:

- Many official and non-official organisations, charitable and religious trusts and endowments as well as individuals and corporate entities have been coming forward to sponsor them;
- Health Camps permit taking specialists closer to the farmers;
- Farmers have the opportunity to get service and advice on a wide range of their problems;
- There is a need for proper planning, scheduling and organisation of the same by the AHD involving the Local Bodies.

As a liaison person, the AHW has a crucial role in the organisation of Health Camps and hence, the need is to train them on all aspects of this service too.

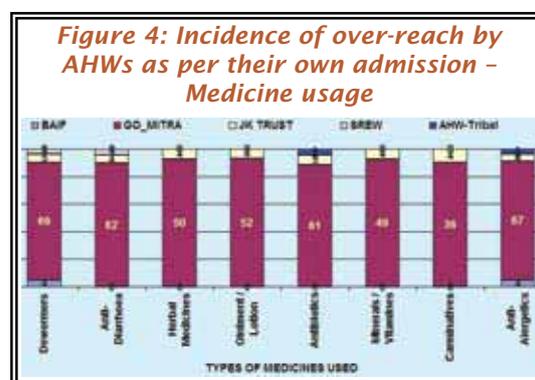
6.3 The views of the LCPs - Quantitative aspects

- Each local concerned person was requested to tell, in their opinion, how many artificial inseminations, first aid cases, vaccinations, de-worming cases, castrations were carried out by AHWs, under their scrutiny, during 2004-2005.
- The very divergent values so given could not be processed as they were on a group basis, AHWs per group were quite divergent, precise numbers of the AHWs involved per LCP was not clear, the values are very wildly diverse, such values are generally 2-3 times higher than what the AHWs told and hence it was difficult to reconcile this quantitative information for making comparisons.
- The valuable qualitative information provided by them on this subject has been discussed later.

7. OVER-REACH BY AHWs

The AHWs were trained and deployed to carry out a limited set of basic services

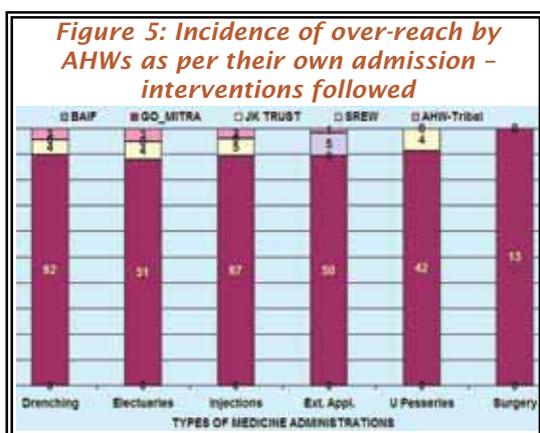
at the doorsteps of the farmers. They are neither trained for nor are expected to carry out such services that can only be carried out by a qualified veterinarian. If the AHWs are still carrying out such activities, that would be a clear case of over-reach on their part, i.e. going beyond their brief. The study has also tried to find out whether such an over-reach by AHWs exists by directly asking the AHWs about it and also from the local officials and individuals concerned with the work of the AHWs directly or indirectly.



7.1 Views of the AHWs

If the AHWs still carry out such practices, they are clearly over-reaching their brief. To know this, they were asked in a very discrete and simple way (jumbled with other options) to figure out whether they carry out any such activities (See Table 4 & 5).

It is obvious from the above figures that most of them, especially the Gopal Mitras do undertake actual 'Treatment' of animals (as against only provision of 'First Aid'). As can be seen in Figures 4 & 5 (marked with arrows), the AHWs do carry out some 'undesirable practices' (uses) by their own statements. The Gopal Mitras were the most known in this respect (See Table 7 below). Only the Sheep Extension Workers were not indulging in such activities. Though BAIF AHWs are also reported to be good, they do use analgesics and anti-allergic medicines not expected to be used by persons with their limited qualification. As mentioned earlier, the Tribal AHWs (3 in Visakaha



area) are not cared for by any responsible agency. Hence, they resort to widespread use of many such medicines.

7.2 Views of LCPs

As per the opinion of the 'Local Concerned Persons', the main incidence of over-reach or of any undesirable practices by AHWs are - use of antibiotics (46%), use of wrong doses (17%), use of wrong techniques (13%), carrying out surgical procedures (9%), ignoring small ruminants (8%) and improper care of equipment (7%). These were errors, omissions or commissions perpetuated by the AHWs according to local concerned persons, who include technical personnel (7 veterinary officers, 14 veterinary assistant surgeons and 21 government paravets). Apart from being harmful, these practices are also highly undesirable.

7.3 Views of the farmers

From the discussions on the views of the farmers on the various aspects of service

provision by AHWs, the following aspects emerged:

- The reach of livestock services by service providers, including primarily AHWs in this study, has been feeble in the case of: a) marginalised areas like hilly tribal and rain-fed upland areas, b) medium and large flock keeping traditional shepherds, c) wage earners large ruminant keeping scheduled caste households. The satisfaction levels of farmers with the services provided by the AHWs (also by other service providers) were also somewhat low.
- Services like 'Use of Local Medicines' (home remedies, herbal medicines, etc.), 'Organisation of Health Camps', castrations and dewormings were carried out very infrequently.

These tendencies amongst AHWs have a potential to become uncontrollable later, if immediate steps are not taken now. These could lead to serious technical, organisational and credibility (of the services) problems. Such over-reach problems can be reduced, if not totally eliminated, by taking urgent and persistent steps towards: a) Supervision, and b) Training.

Apart from improving the supervision and related procedures, trainings can also play a crucial role in this. It is during these trainings that they have to be imparted with appropriate knowledge about the dangers of their over-reach in the long run. Obviously, the future training efforts have to be modified to

Table 7: Percentage of different AHWs resorting to the following undesirable practices

TYPE OF AHW	USE OF ANTIBIOTICS	USE OF ANALGESIC/ ANTI-ALLERGY	PARENTRAL ADMINISTRATION	USING UTERINE PESSARIES	DOING SURGICAL PROCEDURES
BAIF_AHW	0	80	0	0	0
Gopal Mitra	69	76	91	48	15
JKT_AHW	63	50	63	50	0
Sheep EW	0	0	0	0	0
Tribal-AHW	100	100	100	0	0

pay a greater attention to the bottom half of the subjects in formulating their curricula. The topic/subject is crucial as it can make the AHWs use less costly, locally available medicaments (home remedies, herbal medicines, etc.), which can perhaps reduce the tendency of the AHWs to use costly and often unnecessary antibiotic, anti-allergic and analgesic medicines.

This also calls for the training of supervisory staff (VAS and Officers) in the modern management of support, supplies and the supervision of the AHWs. In fact, the survey of VLDA/APLDA of 2004 involving all of the Gopal Mitras and supervisory staff in the three north coastal Andhra districts brought out this need very strongly. Supervision would be more successful if there are incentives that are related to checks and quality control of their work.

8. SUPERVISION, SUPPLIES & SUPPORT

8.1 Existing system

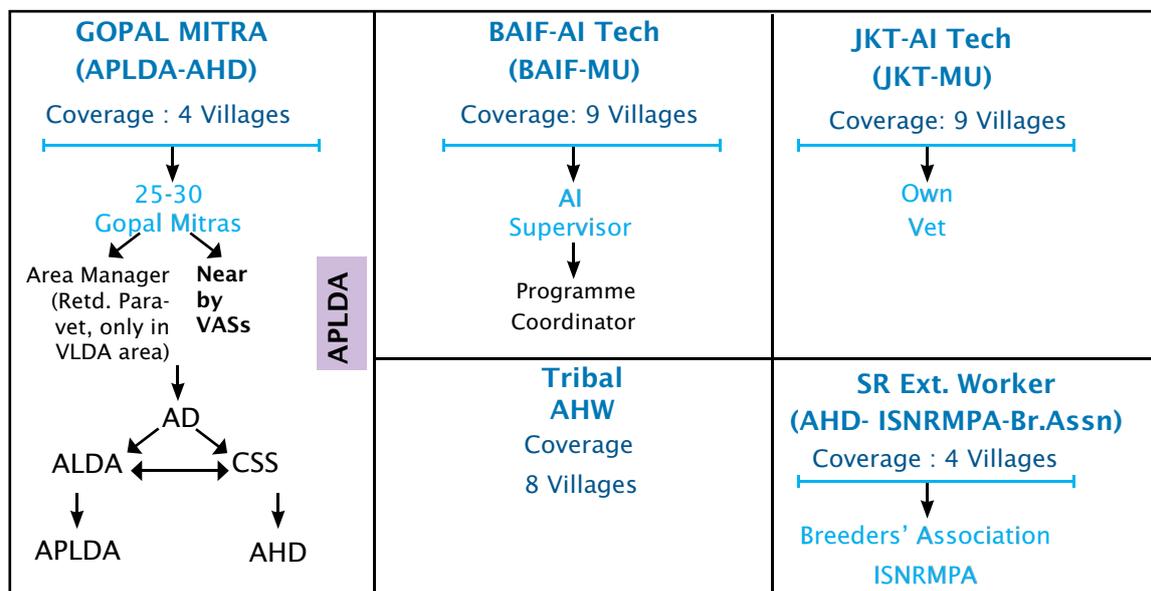
The key to an efficient service delivery by the AHWs is close, continuous and efficient supervision, supplies and support by properly qualified and well-equipped technical personnel who are

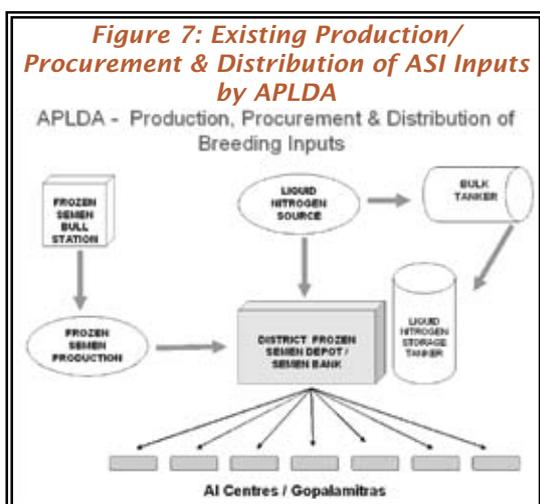
provided with the necessary logistics. The existing systems of supplying inputs and supervision for various AHWs are depicted below.

For every 25 to 30 Gopal Mitras, there is just one supervisor. Under the VLDA, there used to be one retired government paravet supervising their work until recently in the three north coastal Andhra districts (see left column in the Table). But now, the VAS nearest to the Gopal Mitra village is assigned with the task of support and supervision. But this 'nearest VAS' is not exclusive to the SSS work pertaining to AHWs; it is just one of the many technical and non-technical tasks that are routinely assigned to the VAS. However, there are specific personnel attending to the SSS of the AHWs as the sole task of the AHWs of BAIF, JKT and also for the SR Extension Workers. As mentioned earlier, the Tribal AHWs (3 in Visakaha area) are not cared for by any responsible agency.

An efficient system of SSS can go a long way in improving not only the material supplies and technical support, but also the quality of services provided by the AHWs, besides reducing the errors, omissions and commissions by them – the so called over-reach. Also there is a dichotomy of the ultimate reporting authority, namely,

Figure 6: Existing System of Supplies, Support & Supervision of different AHWs in AP





APLDA and AHD; whereas in the field, the Gopal Mitra is one single entity providing all the services.

The above diagram presents the whole gamut of actions that the APLDA undertakes for the production and distribution of AI inputs - semen and liquid nitrogen - to Gopal Mitras as well as to the departmental AI centers. The NGOs BAIF and JKT, the other AI service providers supply these items from their sources. Vaccines and medicines, when available and to the extent possible, go through the channels of the AHD of the state, to AD ALDA and ultimately to the Gopal Mitras via the 'nearest VAS'. The other organisations supply via their own channels.

The quality of the services that these organisations provide, are to the satisfaction of the farmers (see diagram No. 9). Only about 20% of the Small Ruminant Extension Workers, one out of the five interviewed, do not feel so. Only the AHWs of the NGO BAIF felt 100% sure that the SSS is satisfactory; in general, 22% of the AHWs having felt that the same is not satisfactory (see diagram No. 9 below). The respective percentage of the AHWs saying that the SSS were not satisfactory is as follows: 100% - Tribal VHWs, 80% SR Extension Workers, 50% NGO-JKT and 17% Gopal Mitras.

8.1.1 Views of the Farmers:

An attempt was also made to record the

views of the farmers on the quality of the existing system of the SSS (see Figure 9). According to the farmers, all the attention with regards to the SSS is being paid to AI, First Aid and Vaccination services being carried out by the AHWs with 89% of the responding farmers saying that it was 'Good' and even 'Very Good'. This percentage of farmers satisfied with the SSS falls to about 40% (range 37 to 50%) for the other crucial services. Thus there is a lot to be done for improving the quality of the SSS pertaining to the work of AHWs.

The views of the 'Local Concerned Persons' (LCPs) on the existing system of Supervision, Support and Supplies was not sought as most are supervisors themselves. However, some of their comments on this aspect can be found in the next Section (9.3).

But there is a scope for improvement on the quality of Supervision, Support and Supplies (SSS) to the AHW, especially of Tribal - VHWs, SR Extension Workers, AHWs of NGO JKT and Gopal Mitra in that order. In this, more attention has to be paid by the SSS towards de-worming, spreading better livestock management messages, fodder development, castration, use of local medicines and the organisation of health camps.

8.2 Views on sustaining AHWs in the future

The general impression that one gets from all this exercise and discussions with field staff including the AHWs themselves is that they are on their own in the field.

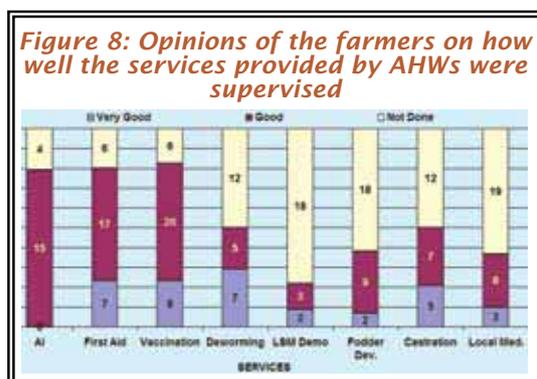
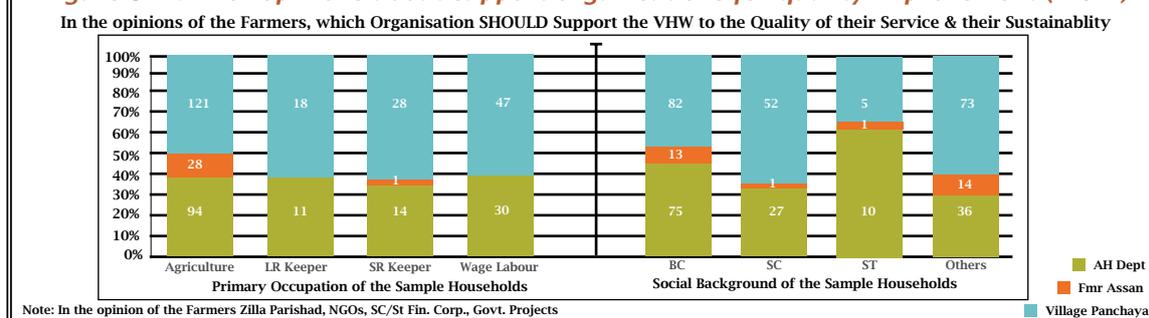


Figure 9: Farmer opinions about support organisations for quality improvement (A & B)



Unfortunately, Gopal Mitras – the strongest AHW cadre in Andhra Pradesh with about 2,000 individuals in the field – also seems to be ‘no body’s baby’ at present. Though the HAD/APLDA are there, in general the Gopal Mitras are not owned and patronised by any single organisation. So an attempt is made to know from all concerned on how this situation can be improved.

8.2.1 Views of the AHWs:

Supply of AI related inputs has been ‘very good’ according to almost all of the AHWs. But some 30 to 40% AHWs said that the supply has been ‘Good’, when it came to vaccines and deworming medicines. A creditable exception to this was the Small Ruminant Extension Workers, all five of whom felt that the supply of vaccines and de-worming medicines was ‘Good’. Worse off was the supply of medicines for treatment, which in fact was not exactly a mandate for the AHD or APLDA.

Whereas, 95% of the AHWs, irrespective of the organisation, said that the supervision as well as quality of the services provided by them by their supervisors has been ‘Good’ and ‘Very Good’. More or less similar was their opinion in regard to the follow-up of two other crucial activities, namely, pregnancy diagnosis and stock identification.

From the 653 suggestions from 98 AHWs towards improvement of the quality of their services, it emerges that the main steps needed to be taken are as follows. The adjacent figures are percentages of the suggestions subscribing to the given improvement:

These are the main suggestions. In

1.	Free/subsidised inputs	18%
2.	More training to AHWs	10%
3.	Providing wages/salaries to AHWs	08%
4.	Better technical support from AHD	08%
5.	Organisation of frequent health camps	07%
6.	Organising farmers’ awareness meetings/training	06%

fact, more intensive trainings of AHWs, provision of wages/salaries/incentives to AHWs, supply of free or subsidised medicines, etc. and frequent organisation of farmer awareness meetings and health camps are the most common suggestions not only for sustaining AHWs and improving the quality of the services provided by them, but also for improving farmer satisfaction, the income of AHWs and the technical support of and rapport with AHD.

All these meant that though the AHWs stated that the supervision, support and supplies to them have been reasonably good, there were still some aspects that needed improvement, especially the issues relating to their economic survivability.

8.2.2 Views of the Farmers:

Though the farmers were given an option to suggest from amongst eight possible organisations, they have consistently suggested that the AHD and the Village Panchayats as the ones who could support and sustain AHWs and improve their utility for the farmers. The only difference is the relative importance – 60% of the farmers said that the AHD should support the AHWs (Gopal Mitra), the remainder opting for the Village Panchayats. Such a trend is similar across different farmer categories

and different areas, though it looks that the poorer farmers prefer the Village Panchayats a little more than they do the AHD.

8.2.3 Views of the LCPs

The top ten suggestions of the local Concerned Persons (% of total) for: a) Improving the Quality of Services, b) Increasing the Area of Services, c) Improving Monitoring and Supervision, d) Integration of AHWs Services in the AHD, e) Improving the Role of Community & Local Bodies, and f) Improving the AHWs' Income. Such suggestions in the order of priority are as follows.

1.	More Training	33%
2.	Better Supervision	13%
3.	Financial Incentives	10%
4.	Better Supply of medicines, etc	07%
5.	Proper Selection of HQ & Villages	06%
6.	Provide Phone Facility	06%
7.	Provide Mobility	06%
8.	Prompt inputs	06%
9.	Provision of proper equipments	05%
10.	Involve Locals	05%

By more training they meant advanced, refresher, re-orientation programmes covering the present topics in greater detail and some new and emerging topics that might be needed (Please refer to the First Report on Training). 'Better Supervision' meant fortnightly or at least monthly. The 'Financial Incentives' suggested included monthly stipend, incentives for calves born by AI, etc. By mentioning 'Involve Locals' they meant involvement of NGOs, Coops, Panchayats and farmer groups.

Those were the LCPs who were in direct contact with the AHWs, their work and living conditions, on a day-to-day basis who were the most forthcoming with their suggestions. They included a total of 52 individuals (including six women) comprising 14 AHD VAS, 21 AHD Paravets, 17 Elected Representatives of Panchayats and 5 Elected Representatives of ALDA/LS Breeders' Associations.

The LCPs also felt that the AHD (39%), ALDA (16%) and Village Panchayats (15%) could have the most potential in owning and patronising AHWs in the future. We have seen that the AHWs as well as the farmers too felt that the AHD would be the most appropriate organisation for this purpose. Local peoples'/farmers' organisations would be better, but this could be a gradual shift to them ultimately, as there are many aspects to be standardised in their functioning at present.

The advantage with AHD (also APLDA) is that it can act as a sound base for technical support, supplies, supervision and quality control of services using judiciously paid stipends and incentives. This would be really an excellent opportunity for low-cost extension of the outreach of all the livestock services of the department, especially to the marginalised areas and the neglected sections of livestock farmers at present.

The combined views of the Gopal Mitras (400) and their supervisors (52) obtained in the VLDA/APLDA Study of 2004 in the North Coastal Andhra Districts revealed that the supervisors too need a regular refresher training to improve their work vis-à-vis support and supervision of the Gopal Mitras (Table 8). This could well apply to other regions of the State. The training needs that were suggested are as follows. It may be noted that the practice of using retired Government Paravets as Gopal Mitra Supervisors is no longer in practice.

Thus, the three main steps that are needed for improving the support and supervision of the Gopal Mitras which emerged from the above discussions include:

- A. Attaching the AHWs to an organisation (AHD immediately and farmers' organisations ultimately) not just to channelise supplies and organise supervision but also for quality control of the services via tactically used financial incentives.
- B. Training the supervisors to impart to them people related management and

Table 8: Training needs of supervisory staff and paravets

TRAINING NEEDS OF SUPERVISING VAS AND GOVERNMENT PARAVETS	TRAINING NEEDS OF AD (CSCC): MANAGEMENT SKILLS
1. Proper communication of the message	1. Time management of LN supply
2. Organising farmer training camps	2. Crisis management
3. Public relationship skills	3. Communication with staff and the farmers
4. Extension skills (Flip charts, charts etc)	4. Management of meetings
5. Organising fertility camps	5. Problem solving and decision making
6. Technical reorientation	6. Procurement management
7. Organising farmer awareness camps	7. Supervision of the AHWs and supervisors
8. Organising farmer meets	8. Motivation of the Supervisors and AHWs
9. Confidence building in the AHWs and the public	9. Evaluation of the AHWs and Supervisors
10. Supervisory skills	10. Finance Management
	11. Monitoring the Supply of inputs
	12. Liaison with the AH Department
	13. Organisation of fertility camps, calf rallies, etc.
	14. Quality maintenance
	15. Report writing

extension skills.

C. NGOs and area and/or beneficiary related development Projects could also be included in this.

9. FUTURE STRATEGIES – CONCLUSIONS & RECOMMENDATIONS

The study started with a set of objectives (See Section 1) that were aimed at answering various questions regarding the Community Based Animal Health Workers so that necessary strategies may be developed for improvement of their training and service delivery in the future. It may be noted that the information relevant to the Objective 1 and Objective 3 was furnished in the First Report 'Paravet Training Programmes in Andhra Pradesh'. The same are reproduced here to give an overall picture.

9.1 Trainings provided to Para-veterinarians and Paravet workers

a) In the interest of providing satisfactory livestock services to the farmers, it is necessary to have similarly trained

AHWs' everywhere providing the same set services, whichever be the service providing organisation. In other words, whether it is the Gopal Mitra or the AHWs of the NGOs providing the same set of services, it is imperative that they all have a comprehensive broad-based training. Trainings exclusively for AI service, in the field context, is not desirable; The Gopal Mitras, BAIF AHWs and the JKT AHWs are carrying out other services also. It is inevitable in the field.

b) There are programmes lasting from 20 days to 180 days for AHWs. One organisation may claim that they also teach a given subject (say First Aid) and hence their AHWs are game for it in the field. But the 'First Aid' dealt with in a 20-30 day programme would be superficial whereas the same taught in a 3-4 months programme will be comprehensive. Hence, there is a need for standardising the course duration for all. A committee to review these should include representatives of the stakeholders, especially the NGOs.

c) After the successful completion of



Extension is a critical input for fodder production - an extension team interacting with farmers

the training as judged by a committee (Concerned JD, Trainer AD and a Retired Veterinarian) via Practical and Viva tests, the trainee should be issued with a proper 'Course Certificate'.

- d) Such a Course Certificate should clearly mention that the concerned person is 'permitted to provide basic livestock services under the supervision of a qualified veterinarian'.
- e) So as to address specific problems of the three problem areas, only the candidates from the respective societies and localities should be selected in consultation with the society elders; however, the candidates must satisfy the admission qualifications. They are:
 - Landless, daily wage earner, SC community-- From the same SC Society
 - Hilly, tribal, low-livestock potential area-- From the same Tribal Society
 - Medium & large flock owning Shepherds-- From the same Shepherd Society
- f) The whole training cost may be borne by the government. This expenditure may be considered as an investment for popularising and low-cost spreading of the services.
- g) Boarding and lodging facilities should be provided by the training organisations. If necessary, the facilities available with the District Dairy Unions may be requested for the purpose.
- h) It is better to consider the 1 and 2 years

training programmes for candidates to be posted as Paravets in the government services separately from that of the Community Based Para-Workers as the two are not comparable.

Note: Following this study and generally in consonance with its recommendations, the Govt. of Andhra Pradesh appointed an Expert Committee as per the government order Rt. No.71 dated 23rd February 2005. The committee after careful assessment of all the aspects involved, recommended comprehensive course curriculum and modules for three deferent levels of paravet / AHW training, which the Govt. have accepted. Details of these are presented in the report 'Mainstreaming of Minor Veterinary Services in Andhra Pradesh'.

9.2 Present livestock service delivery by Para-veterinarians and Para-vet workers

- a) An AHW is providing basic services, on an average in an area of five villages covering a population of 828 cattle, 1,447 buffaloes, 4,749 sheep, 1,023 goats, 197 pigs and 3,062 poultry per year.
- b) The present potential of an AHW is to cover about 500 breedable bovines, whereas the present (2004) population of breedable bovines in the villages covered by an AHW is 1600. Thus, the potential coverage is around 1/3rd of the existing breedable animals in the villages covered.
- c) Amongst the services studied, the quality of provision-wise, three categories emerge:
 - 'AI', 'First Aid', Vaccination' and 'De-worming' whose quality was felt to be mostly better by the farmers;
 - 'Livestock Management Advice', 'Fodder Development', 'Castration' and 'Use of Local Medicines' whose quality was felt to be inferior by the farmers; and
 - 'Other - Organisation of Health Camps' brought up by the farmers under 'Other' and for which they felt that the AHWs are not up to the task.

d) 'Low' livestock potential Mandals turn out to be the most successful terrain for AHWs; the animals being more important to the perhaps financially not so well-endowed locals for livelihood. Farmers of the 'Medium' and 'High' livestock potential Mandals are, in general, have the next best satisfaction levels with the services of AHWs.

e) Paravets: Veterinary Assistant and Vet. PolyTechnique programmes are entirely different types of programmes - 1 or 2 years long and for the preparation of paravets to be absorbed into the government service. Because of the diverse duties that these trainees have to perform and due to the necessity, they are trained in much greater depth on a wider range of topics and their duties are also different.

f) According to the farmers, all attention with regards to Supervision, Support and Supplies is being paid to AI, First Aid and Vaccination services being carried out by the AHWs with 89% of the responding farmers saying that it was 'Good' and even 'Very Good'. This percentage of farmers who are satisfied with the Supervision, Support and Supplies, falls to about 40% (range 37 to 50%) for other crucial services.

9.3 Improving the effectiveness of the services

a) More intensive trainings of AHWs, provision of incentives to AHWs, supply of free or subsidised medicines, etc. and a frequent organisation of farmer awareness meetings and health camps are the most common suggestions not only for sustaining AHWs and improving the quality of the services provided by them, but also for improving farmer satisfaction, the income of AHWs and the technical support of and rapport with the AHD. These are worth consideration by the concerned authorities.

b) Anchoring the AHWs with an organisation is important. The farmers have consistently suggested AHDs and

village Panchayats as the organisations that can support and sustain AHWs in the future and improve their utility to the farmers. The only difference is their relative importance - 60% of the farmers saying that AHD should support the AHWs (mainly Gopal Mitras) and the reminder opting for the Village Panchayats. Wherever the dairy cooperatives and the Breeder's Associations are active in service delivery, the AHWs could very well be linked to them for service, support and supervision.

c) The advantage with AHD (and/or APLDA) is that it can act as a sound base for technical support, supplies, supervision and quality control of the services using judiciously paid stipends and incentives. This would be an excellent opportunity for low-cost extension of the outreach of all the livestock services of the department, especially to marginalised areas and to the, at present neglected sections of livestock farmers.

d) Thus the main steps that are needed for improving the support and supervision of the Gopal Mitras that emerge from the above discussions include the following:

- Attaching the AHWs to an organisation (AHD immediately and peoples/farmers' organisations ultimately) not just to channelise supplies and organise supervision but also for quality control of the services via tactically used financial incentives.

- Further training of AHWs. Also training of supervisors to impart people related management and extension skills.

- NGOs and area and/or beneficiary related development Projects should also be a part of these trainings.

- Provide a monthly stipend of Rs. 1,500 per trained and placed AHW for a period of one year, so that he/she can establish him/herself. This stipend should be for a period of two years in case of the three categories of AHWs trained and placed

for working – i) amongst landless wage earning SC large ruminant keepers, ii) amongst medium and large flock owning traditional shepherds, and iii) in marginalised, hilly tribal areas.

- Institute payment of financial incentives for – i) AI calves born, ii) reduction in disease incidence/outbreak, iii) cash awards for the best AHW at the Mandal, district and state levels after a proper scrutiny by an appropriate committee, farmers and LCPs.
- A cadre of VAS, say ‘VAS i/c AHWs’, may be specially assigned to each Mandal just for support and supervision of the AHWs in that Mandal. He should be located at the Mandal level VH or VD, kept free from other duties and be provided with TA/Transport for touring the Gopal Mitra centers in the Mandal. The VAS manning the proposed Mobile Veterinary Clinics could be the ideal person for this task.
- The monthly stipend amount of the AHWs should be released only after this ‘VAS i/c AHWs’ issues a clearance stating that the work of the AHW during the month was satisfactory. This would induce an element of quality control of the work of AHWs.
- This assessment has to be done on the basis of - a) at least one visit by the VAS to the Gopal Mitra/AHW centre and b) at least one visit by the AHW / Gopal Mitra to the office of the VAS. During such visits, the following tasks may be undertaken – i) Verification of records, ii) Technical back-stopping, iii) Issue of supplies (medicines, vaccines, semen, liquid nitrogen etc), iv) Problem solving and v) Quality control etc.
- e) Every one – farmers, local concerned persons, the working AHWs - feel that the organisation of health camps is an important service to the farmers’ animals. But at present such camps are not very frequent. But this ‘service’ should be seriously considered in all our future plans as this is actually a medium for providing a gamut of quality services to a large number of farmers

periodically at least. The AHW would be a key person in the organisation of such camps.

9.4 Gopal Mitra in the field

- a) At present, on an average, a Gopal Mitra is performing around 170 AIs per annum. The potential for an AHW is to cover not less than 500 breedable bovines, whereas the present (2004) population of breedable bovines in the villages covered by an AHW is 1600. Thus, the coverage is still around 1/3rd of the breedable animals. There is a need for improving the coverage by 100%. Indications are that it can easily be done as the best performance by a Gopal Mitra ranges from 650 to 2100 per year. With efforts and after some time, 100% coverage can be achieved.
- b) Per year a Gopal Mitra provides the basic services, on an average in an area of five villages, covering a population of 494 cattle, 796 buffaloes, 2,043 sheep, 372 goats, and 1,142 poultry per year.
- c) At present, the trained AHWs especially Gopal Mitras constituting 80% of the AHWs, are on their own from day one with a rather weak support and supervision system in place. The ‘nearest VAS’ who is expected to supervise the work of the AHWs is very busy with a plethora of other technical and non-technical duties.
- d) This is an important reason for the not so good out-reach and not so desirable over-reach by them. The following system is suggested as a common solution for – a) improving the quality of the services of the AHWs along the desired lines; b) making them responsible for the consequences – good and bad – of their activities; c) remove disparities between Gopal Mitras and NGOs (BAIF, JKT, RASS) AHWs; and c) integrating them into the overall service delivery system.
- e) Over-reach: Most of the AHWs, especially the Gopal Mitras, do undertake actual ‘Treatment’ of animals (as against the

provision of 'First Aid'). This is a case of over-reach by them as they are indulging in the - Use of Antibiotics, Use of Analgesic/Anti-Allergy, Administration of Injections, Administration of Uterine Pessaries and Surgical Procedures. Other errors, omissions and commissions perpetuated by the AHWs as percentages of the farmers and LCPs reporting them are as follows:

- i) Use of antibiotics (46%)
 - ii) Use of wrong doses (17%)
 - iii) Use of wrong techniques (13%)
 - iv) Carrying out surgical procedures (9%)
 - v) Ignoring small ruminants (8%)
 - vi) Improper care of equipments (7%)
- f) For a Gopal Mitra, the 'Low' livestock potential Mandals seem to be the most successful terrain; the animals being more important to the perhaps financially not so well-endowed locals for livelihood. Farmers of the 'Medium' and 'High' livestock potential Mandals are, in general, the next best in their satisfaction level with the services of the Gopal Mitras.
- g) The Gopal Mitra cadre has come into its own in Andhra Pradesh. This cadre has firmly established itself and contributes to service provision in increasing numbers year by year. The state is perhaps doing the best among all other states of the country in this regard, if the combined experience of the Study Team members is any indication.
- h) This cadre has to be nurtured and allowed to grow as their functioning would be an economical extension of the livestock services at the doorsteps even in the remote areas and to the disadvantaged communities.
- i) Some of the steps suggested in this report would perhaps help further develop the contribution of Gopal Mitras to the livestock farmers, especially to those for whom livestock is an important livelihood.

- j) In marginalised, hilly tribal areas, only a small proportion of the trained youth (Gopal Mitra curriculum minus AI) are still 'working' due to a non-patronage by anyone, low income and low confidence levels. The reasons are the low priority of livestock keeping among the tribals, very limited scope by tribals to pay user charges and the inability of the Trained Youth AHWs to advertise themselves plus the travel constraints.

9.5 Vaccination of small ruminants & backyard poultry

- a) Simply revealing are the opinions of the landless livestock keepers (who are generally the poorest) and the medium and the large flock keeping small ruminant holders (who are invariably traditional shepherds), a bulk of whom were not satisfied with the services provided by the AHWs.
- b) More pathetic is the picture with regards to vaccination of the poultry kept in the backyard units. The farmers said that only just 5% of such birds are vaccinated.



The most critical input for backyard poultry is timely vaccination. But catching them for vaccination is not easy.

- c) So as to address the specific problems of the three problem areas, only the candidates from the respective societies and localities should be selected in consultation with society elders; however the candidates must satisfy the admission qualifications. They are:

- Landless, daily wage earner, SC community - From the same SC Society
 - Hilly, tribal, low livestock potential area - From the same Tribal Society
 - Medium & large flock owning Shepherds - From the same Shepherd Society
- d) The proposed monthly stipend of Rs.1,500 per trained and placed AHW for a period of one year, should be made eligible for a period of two years in the case of the AHWs functioning among the three categories listed under item c) above, so that he/she can establish himself/herself.

9.6 Need for a further study

From the above observations and conclusions of the study, it emerges that there are three problem areas concerning the provision of livestock services by AHWs, or for that matter, by any service

provider:

1. Farmers in marginal, hilly, tribal, low livestock potential areas of Andhra Pradesh spread across 7 districts;
2. Landless, daily wage earning, scheduled caste livestock keepers; and
3. Medium and small ruminant flock holding traditional shepherd communities.

All of them are mostly poor farmers. It is difficult from a general study, like the present one to get precise information about the problems specific to such areas/communities, for whom livestock are a crucial livelihood resource. The Study Team feels that there is a definite need for a special in-depth study with a focus on such areas/communities that would enable us to evolve livestock development and livestock service delivery strategies appropriate to the local conditions and needs.





Swiss Agency for Development and Cooperation (SDC)
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The Swiss Agency for Development and Cooperation (SDC) is the development arm of the Federal Ministry of Foreign Affairs of the Government of Switzerland engaged in international development cooperation. SDC works in India with a focus on poverty reduction in the semi-arid rural regions of the country.

Started in 1963 with a technical collaboration in milk production, SDC's partnership with India's development agenda is spread over a diverse set of engagements covering natural resource management, rural finance and livelihoods, decentralisation, empowerment of the discriminated, environment and pollution, humanitarian assistance as well as human and institutional development. SDC India's partners include civil society organizations, Govt. departments, public sector entities, research advocacy groups, professional associations and other development agencies. Its goal is to support people initiated, people owned and people controlled processes that render sustainable and equitable rural development in India.



South Asia Pro-Poor Livestock Policy Programme (SAPPLPP),
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Web site: www.sapplpp.org

The Pro-Poor Livestock Policy Initiative (PPLPI) of the Food and Agricultural Organisation (FAO), launched in 2001, aims to facilitate and support livestock-related policies and institutional changes that have a positive impact on the world's poor. The "Reforms in Livestock Service Delivery Systems – Experiences from a Participatory Process in Andhra Pradesh" constitute a prime example of national and international cooperation leading to an improved mutual understanding with ultimate benefits for the poor.

The South Asia Pro-Poor Livestock Policy Programme (SA PPLPP) was launched in July 2007 as the 'successor' of the PPLPI South Asia Hub through a partnership between the National Dairy Development Board of India (NDDDB) and the FAO's PPLPI. The mission of SA PPLPP is 'to ensure that the interests of poor female/male livestock keepers are reflected in national, regional and international policies and programmes affecting their livelihoods'. Up scaling the lessons learnt from the "Reforms in Livestock Service Delivery Systems" is an important item on the agenda of SA PPLPP.



Intercooperation in India (IC)
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Intercooperation (IC) is a leading Swiss non-profit foundation engaged in the development and international cooperation for 25 years. IC is a resource and knowledge organisation with 550 professionals working in 22 countries including Afghanistan, India, Pakistan, Bangladesh and Nepal in South Asia. IC works with a number of agencies like SDC, World Bank, IFAD, GtZ, SECO, EU, ITTO, governments and NGOs.

During its early days, IC focused on providing technical expertise to livestock and dairy programmes of the SDC in many states. Its working domains further expanded to cover institutional development and capacity-building; watershed development and sustainable agriculture; decentralized planning and development and adaptation to climate change. Since 2006, IC operates as a registered entity in India, collaborating with governments and a wide variety of organizations. IC's working domains in India are Livestock, livelihoods and environment; Vulnerability and adaptation to climate change and Local governance & civil society.



Capitalisation of Livestock Programme Experiences India
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CALPI is a programme of the SDC implemented by the IC. Its objective is to capitalise on the rich experiences of SDC-IC to significantly inspire changes in the economic, administrative, legal and policy frame conditions in the livestock sector in such a way that the priorities and challenges of the rural livelihood systems are effectively addressed and the rural poor, particularly women, benefit from the emerging opportunities. In its first phase from May 2002 to July 2006, CALPI supported 17 projects and ten activities spread over seven thrust areas through a network of 27 partners. In its second phase (consolidation phase) of two years from August 2006, CALPI supports nine projects.

All the projects supported by CALPI function on a multi-partner, consortia/resource pooling mode following a participatory process, beginning with the capacity development of the partners and stakeholders. Most of them focus on niche areas and well identified support gaps of high impact potential on the poor. CALPI always focuses on building synergies and convergence with the Governments playing a facilitating and steering role.

