

Volume 1

Assessment and Reflections on Livestock Service Delivery Systems in Andhra Pradesh

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.

Proceedings of the Workshops and Consultations held at Mahbubnagar, Chittoor, Annavaram, Nalgonda and Rampachodavaram

This document presents the experiences from an initiative on 'Reforms in Livestock Service Delivery Systems - Experiences from a participatory process in Andhra Pradesh' designed and implemented jointly by CALPI, (Capitalisation of Livestock Programme Experiences India), a programme of the Swiss Agency for Development and Cooperation and the Intercooperation, 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 initiative was aimed at developing a widely owned reform action plan for livestock service delivery in Andhra Pradesh through a multi-stakeholder consultative process.

Volume 3

Para-veterinarians and Animal Health Workers in Andhra Pradesh

Presents the profile of Para-veterinarians and the Animal Health Workers in Andhra Pradesh, their placement, service delivery, supplies, support, supervision, over reach beyond the scope of their training and suggestions for 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.

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 2 to 5.

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 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.

Assessment and Reflections on Livestock Service Delivery Systems in Andhra Pradesh

Proceedings of the Workshops and Consultations held at Mahbubnagar, Chittoor, Nalgonda, Annavaram and Rampachodavaram

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Assessment and Reflections on Livestock Service Delivery Systems in Andhra Pradesh

Proceedings of the Workshops and Consultations held
at Mahbubnagar, Chittoor, Nalgonda, Annavaram and
Rampachodavaram





Acknowledgments

This report is based on a series of Workshops and Consultations on livestock service delivery systems held at different districts and villages of Andhra Pradesh. The Workshops and Consultations were organised under the auspicious of the joint PPLPI-CALPI-AHD initiative to examine the effectiveness of livestock service delivery systems in Andhra Pradesh by bringing together individual farmers, farmer groups, NGOs, students of Veterinary Colleges and functionaries of the Government by encouraging and facilitating an open dialogue. The project functioned under the overall guidance and supervision of a Steering Committee set-up by GoAP. Under the aegis of this project, five district and village level Consultations were organised at various locations in Andhra Pradesh—Musapet in Mahbubnagar District, Chittoor in Chittoor District, Annavaram and Rampachodavaram in East Godavari district and some selected villages in Nalgonda district. The purpose of these consultations was to bring together farmer groups, NGOs, State and District level functionaries of the Government and encourage an open discussion on the status of livestock service delivery and the need for reforms. The Consultations were usually organised by the District administration, facilitated by SMILDA (State Management Institute for Livestock Development Andhra Pradesh) and guided and supervised by the CEO, APLDA and the Additional Director (AH), Production. The financial and technical backstopping support was provided by CALPI and PPLPI.

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Contents



Acknowledgments	ii
Abbreviations	iv
Foreword	v
Message	vi
Key Recommendations	1
Animal Health and Breeding Service Delivery System	1
Extension Support and Training of Farmers.....	5
Poor and marginal areas (tribal groups, dalits, etc).	5
Feed and Fodder/Livestock Products Marketing	6
Background	7
Proceedings of Consultations Held at Various Locations	9
Chittoor	16
Group 1: Breeding Services	
Group 2: Credit and Insurance	
Group 3: Animal Health Services	
Group 4: Marketing	
Group 5: Feeds and Fodder	
Group 6: Other Issues	
Annavaram	22
Group Discussions on Issues Identified by the Plenum	
Group 1: Animal Health Services	
Group 2: Breeding Services	
Group 3: Extension Support and Training of Farmers	
Group 4: Farm Level Credit and Insurance	
Group 5: Marketing	
Group 6: Feeds and Fodder	
Consultation with tribal communities in Rampachodavaram.....	29
Conclusions	30
Consultation with Sheep Breeders Association, Nalgonda.....	31
Discussions with Sheep Breeders' District Union	34
Annex 1: Demographic information of the villages visited	35
Annex 2: Livestock population and distribution of house holds	36
Annex 3: Marketing infrastructure in the villages visited	38
Annex 4: Demographic information of the six villages visited	39
Annex 5: Livestock population and distribution of house holds	40
Annex 6: Marketing infrastructure and cooperatives	42



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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Message

March 26, 2008

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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





Key Recommendations

Andhra Pradesh has a strong, well qualified, committed and forward looking State Animal Health Service. The state has a large network of veterinary institutions—Veterinary dispensaries, hospitals and polyclinics, Rural Livestock Units, AI centres and so on—and individuals—professional veterinarians and the para staff. The farmers have generally appreciated the support received from AHD either in terms of routine animal health and breeding services or emergency response at the time of disease outbreaks.

Within the constraint of the political environment and the human, physical and financial resources, the department has been doing a commendable job. However, changing internal and external environment requires the animal health and breeding service delivery system to become more dynamic and need oriented, financially sustainable and closer to the ground. Based on the studies and consultations undertaken for CALPI-PPLPI-AHD initiative, following observations are made in this regard:

Animal Health and Breeding Service Delivery System

1. The State of Andhra Pradesh must strive hard towards moving all livestock services to farmers' doorsteps. This would mean (i) moving away from a system of stationary veterinary dispensaries and hospitals and (ii) partnering with other agencies and individuals (cooperatives, NGOs and private entrepreneurs) in extending the reach of services to farmers.

2. The state has rich experience with delivery of services with the help of Animal Health Workers—either private such as Gopal Mitras (with appropriate technical and input supply support from the state) or those employed and supported by NGOs. In general, farmers appreciate the services rendered by these service providers as they are able to reach much closer to the farmers than the AHD. But, there remain concerns about service quality, specially the impact of some undesirable practices in the long run.

In one of the studies undertaken under the auspicious of this project, it was found that paravets and AHWs often go beyond their brief and perform services that they are not equipped or trained for. It is, therefore, important to have in place a strong monitoring, regulating and support system to strengthen and mainstream the service delivery by paraveterinarians and AHWs. Under the auspicious of this project, the GoAP set-up an Expert Group to debate and suggest ways of 'Mainstreaming Minor Veterinary Services in Andhra Pradesh'. The report of the expert group has been submitted to the government and the salient features are summarized below:

Based on an extended debate and wider consultations, the expert committee identified seven broad areas encompassing different services that can be rendered by Paravets/Animal Health Workers. These include:

1. Extension and advisory services
2. Fodder development
3. Preventive health and disease reporting
4. Minor Veterinary Services
5. General dispensations
6. Doorstep inseminations
7. Castration

The services have been categorized as schedules I, II and III services. The spirit underlying the scheduling was to visualize the extent of training, handholding and supervision, which in turn will provide clues in formulating meaningful curricula. The essence of each schedule is given below:

Schedule. I All general extension and fodder development services (which require basic orientation training).

Schedule. II All services that require systematic skill development and guidance of a registered veterinary practitioner.

Schedule. III The services that require advanced training and supervisory





A proud young bull - Andhra Pradesh is rich and unique in terms of its livestock wealth.

guidance of the registered Veterinary Practitioner

A detailed list of schedule wise services is presented in Vol-4.

It is further recommended that Diploma holders from the University and one year certificate holders from the Animal Husbandry Department and those employed in the Animal Husbandry Department, the Veterinary University and NGO institutions etc. may be termed as Para veterinarians whereas all other personnel with shorter duration of training providing minor veterinary services as per Schedule I, II and III may be broadly classified as Animal Health Workers (AHWs). This will include service providers like Gopal Mitras, link workers, Sheep and Goat extension workers, Sanghamitras etc., among many others. The training duration and qualifications for both Para-veterinarians and Animal Health Workers, certification and identification mechanisms and the basic framework for support and supervision are prescribed in detail in the report.

The spirit of the recommendations however is that Animal health workers are a critical link in the overall animal health system and provide an effective model for extending the outreach of animal health service delivery to poor and marginalized areas. However, the realization of their full potential requires a strong linkage and referral system for the purpose of

ethical and professional supervision and technical support. It is therefore essential that they become an integral part of the animal health system. In that context, the Expert Committee has strongly recommended strengthening the linkage between professional veterinarians, para-veterinarians and AHWs, and extending it beyond input supply support. The system must provide for technical back-up and formal referral support, professional and ethical supervision, and the enforcement of regulatory measures. The government is already responsible for ethical/professional supervision, technical back-up and referral support of para-veterinarians employed by it. It is recommended that this function be extended to private and non-government organizations who seek such support and are not able to cover the costs of setting them up.

The linkage of the paravets and the AHWs with the registered veterinary practitioners should be multi-dimensional, going well beyond the mere legal requirements, in order to evolve and render the paravets and AHWs into multi-skilled service providers satisfying both the needs of the farmers and the regulatory requirements under the VCI Act. As private registered veterinary practitioners are few and far between in Andhra Pradesh and the Veterinary Assistant Surgeon (VAS) of the AHD is the most accessible registered veterinary practitioner state wide, the VAS will naturally be the key nodal point in the regulatory/supervisory support set up.

The AHD should formally link with each VAS up to 5 Gopal Mitras/AHWs working within his/her jurisdiction for providing technical and referral support, professional supervision, and the enforcement of the VCI Act. For the AHWs employed by NGOs and private institutions who have registered veterinary practitioners employed by them, the role of the VAS may be limited to the enforcement of necessary regulations for minor veterinary services dispensation. In the case of the Gopal Mitras, the responsibility of the VAS will also include continued and on-the-





job/hands-on training over a three year period to improve the Gopal Mitras's proficiency in minor veterinary/AI services; technical support in terms of referral services for treatment of cases/AI; and opening up with the Gopal Mitras a two-way professional and extension communication channel. The AHD should ensure that these tasks are reflected in the job chart of the VAS as the normal responsibility attached to the position she/he holds.

The Gopal Mitras, on their part, will function as the non-governmental extension of the AHD services delivery chain: the third tier in livestock services delivery, expanding the AHD's reach right into the villages and as a force multiplier in the AHD's fight against animal epidemics. They will remain independent private practitioners, home delivering minor veterinary and AI services as paid inputs, with add-on skills from time to time when necessary. The Gopal Mitras/AHWs will however, be obliged to complement the government's efforts in disease surveillance, outbreak reporting and disease control campaigns as paid associates.

3. As noted before, there is a need to bring sharper focus on disease prevention and control of major livestock diseases. This can have great potential to improve the quality of life of rural people. The high incidence and prevalence of livestock and poultry diseases, often round the year, demands long-term sustainable approaches including provision of operational infrastructure, organised disease monitoring and timely reporting, mobility, biologicals (vaccines and diagnostics) and veterinary professional service providers.

Under the CALPI-PPLPI-AHD initiative, an effort was made to study the most common diseases that cause significant economic losses for the poor in the state of Andhra Pradesh. The objective of this exercise was to help the state administration fine tune its initiatives to provide timely livestock healthcare to the rural poor to prevent disease outbreaks.

A total of five diseases — Haemorrhagic septicaemia (HS), Peste des Petits Ruminants (PPR), Black quarter (BQ), Enterotoxaemia (ET) and Ranikhet disease (RD) — were identified for the purpose. Selection of these diseases was done on the basis of their economic importance for the poor. In absence of precise data/estimates on the extent of economic losses caused by different diseases, the selection of these diseases was done in a brainstorming session comprising representatives of PPLPI, CALPI, AHD, selected professional veterinarians and epidemiologists and NGOs.

The scope and mandate of this exercise was to evolve 'Action Plans' to control the 'identified five diseases' in AP. Keeping this in view, a focused epidemiological analysis of the retrospective seven-year (1998 to 2004) disease outbreak data of AP was attempted to delineate the long-term trends of these diseases. In addition, need-based collateral information on the number of outbreaks, attacks and deaths and the villages affected, weather parameters, migration profiles, population (livestock) density per sq. km., infectivity and habitat aspects of the associated pathogens were reviewed to substantiate their impact on the long term disease trends. This was done with a view to understand specific temporal and spatial parameters associated with the long-term disease trends in the population and their usefulness in evolving control strategies and action plans.



Poultry constitutes a major source of supplementary income and nutrition for the rural poor





The long term influence of monthly and seasonal incidence of disease outbreaks e.g. monsoon periods, also formed basis for data analysis, interpretation, and identification of critical periods for vaccine interventions. The disease situation in the 22 districts of the state was analyzed in totality to prioritize disease burden in each district and this in turn, paved way to categorize districts that sustained around 80 per cent infection load in the past seven years. This was done for all the five 'selected diseases' with specific intention of introducing targeted long term action plans to bring down disease incidence and prevalence levels and the spread of infection to other locations.

Based on the analysis and general epidemiological considerations, a two-pronged approach to disease control is suggested. This includes massive vaccinations in high disease incidence districts to substantially bring down or freeze disease outbreaks in high-risk districts while allowing identification of 'infection foci' should outbreaks surface in low-risk districts. Detailed report has been submitted to the Government of Andhra Pradesh.

4. There is need to initiate a series of awareness building measures since there is low awareness among the farmers on heat detection, postpartum care, nutrition, and overall management of crossbred cows and bulls. There should also be a massive capacity building programme by the department of animal husbandry among the small ruminant breeders through their cooperative societies/NGOs to enable them to select Rams and Bucks and use them for improvement of their flocks. Further, the Sheep/Goat Breeders' Societies should identify progressive breeders from among themselves and specially train them with the help of the Agriculture University as "Breeders of Seed Stock" for supply to other breeders as a commercial activity.

5. There is an element of bias in service delivery towards larger animals. It is the desi fowls in the backyard units and

small ruminants that provide much more livelihood support to the poorest strata of livestock farmers but the existing animal health system (including Gopal Mitras and AHWs employed by NGOs) ignores backyard poultry for preventive health care. This results in heavy mortality and economic losses for the poorest farmers. All village services providers, therefore should be sensitised and mandated to regularly and at the appropriate intervals, vaccinate desi poultry and small ruminants in all villages they cover. In this context it is recommended to make use of the DWACRA trained village women for poultry vaccination and to train one woman in every village for poultry vaccination, along with providing them access to poultry vaccines.



Livestock services are indeed scarce to reach these species in the rural hinterland

6. While strengthening the current system and sharpening the focus on disease control, the state must also initiate thinking towards cost recovery in service delivery to ensure financial sustainability of service delivery and to build genuine quality control mechanisms. It is the assessment of the project team that at least in the progressive and relatively better off areas there may be significant scope of introducing some user charges for selected treatment and breeding services. But, this must also be accompanied by (i) a strong preventive health care system, sharper focus on disease surveillance, diagnostics, reporting and control measures, and (ii) a system to ensure that the revenue so collected can be utilized for improving





the service quality. It is the responsibility of the Animal Husbandry Department to ensure incidence of diseases—specially those diseases that have serious livelihood implications for the poor—is reduced to a minimum to minimize economic losses for the farmers and for reducing the private cost of treatment.

Extension Support and Training of Farmers

1. Launch through the Department of AH, APLDA/VLDA, Cooperatives and NGOs in the region a capacity building and empowerment programme for livestock farmers through Village Based Training (VBT)

2. The Government should structure a livestock extension cell to promote decentralised, independent, village based farmer to farmer livestock extension networks, out side of the Government, involving skilled farmers in the village, women's self help groups, Gopal Mitras and grass root level local NGOs.

3. Mobilise grass root level local NGOs to build training teams and organise VBTs and skill transfers in all villages/ Panchayats falling within their areas of operation and to generate large numbers of skilled farmers to act as the extension constituency for the village and link them to the government departments and rural financial institutions for networking through Mandal Veterinary Officers (AHEOs) and Gopal Mitras.

4. Create in every village at least one skilled lady animal health worker (LAHW) exclusively committed to vaccination of small ruminants and poultry; and provide them constant access through local trade to poultry / small ruminant vaccines. These trained LAHWs will door deliver timely vaccinations for small ruminants and poultry in their respective villages as paid inputs.

5. Skill train and encourage sheep/goat owners to stall feed small ruminants and provide them a package of assistance for stall feeding like: financial support

for animal shelters, feeding mangers, chaff cutters, biogas generators and door delivery of animal health services. To begin with, these may be encouraged in the form of supplementary feeding, proportionately cutting down on grazing.

Poor and marginal areas (tribal groups, dalits, etc).

1. Certain identifiable groups (such as Tribal households, Dalits families, etc) are extremely poor and follow livelihood practices that enable them to barely manage food and subsistence. They have no elasticity for experimenting with new practices, however good they are in the long term. Special support packages for helping them to outgrow their subsistence livelihood systems are essential to help them become productive livestock farmers.

2. A village based livestock service delivery mechanism, community driven but initially paid for by public funds, would be the first step in any development effort. Timely availability of vaccinations and minor veterinary services will reduce production losses, drastically cut down mortality of livestock, increase output, protect farmer investments and help to appreciably increase household incomes.

3. A massive campaign involving grass root level local NGOs to launch capacity building and empowerment of the village communities will act as the harbinger of change and technology adoption and to establish the foundation for a farmer to



Extension service holds high priority in fodder production





farmer livestock extension mechanism, village based, independent and outside of the government.

4. As many of the minor services like vaccination of day old chicks and timely protection against poultry diseases are inaccessible to the poorest groups (specially in marginal areas), several rounds of vaccinations of fowls during the year can be possible only if such skills are available among farmers themselves, so that they can access it constantly. It would therefore be essential to impart skill trainings to farmers to promote self help and self reliance for individual and community benefit.

Feed and Fodder/Livestock Products Marketing

‘Access to remunerative markets for livestock products’ and ‘feed and fodder availability’ are among the most important issues on the minds of farmers. There is a need to examine, more closely, issues in marketing of livestock products and feed and fodder availability. Given that the scope of current initiative was more on animal health and breeding services, this issue could not be explored in detail. It is however recommended that Government of Andhra Pradesh initiates appropriate measures to understand farmer concerns in this respect and undertakes necessary actions to address those concerns.

Lambs and kids always receive high attention from the breeders. But their preventive health care generally remains critical





Background

Production and consumption of livestock products, the role of livestock and the external and internal economic environments that affects producers and consumers across the globe are changing rapidly. In India, the livestock sector is emerging as one of the fastest growing sub-sectors within agriculture. The expectations are that this growth could further accelerate due to growing incomes and high income-elasticity of demand for livestock products. These developments open up new opportunities for enhancing rural incomes and accelerating the pace of poverty alleviation in India. But, successful capitalisation of these opportunities requires a policy regime that facilitates growth in productivity at the farm level as well as in the processing sector. The productive potential of animals depends crucially on the quality of nutrition, genetic material and the animal health system. On all these counts, India has a poor record. Despite a number of initiatives since the early 1960s, the quality of animal health and breeding services remains poor. Public sector continues to be the main service provider with the services (intended) to be provided for free or with heavy subsidies. While the demand for these services is expanding rapidly, widening fiscal deficits and the increasing proportion of departmental budget spent on salaries contributes to the deterioration in the availability and quality of publicly provided livestock

services. It is increasingly becoming clear that the current model of service provision is not sustainable.

A series of studies by the Indian Institute of Management, Ahmedabad, recently examined the structure of demand and supply of livestock services in the selected states—Gujarat, Rajasthan, Kerala and Orissa—and showed that subsidised services are not reaching the poor¹. Further studies demonstrate that the poor are not passive recipients of these services. Instead, they are discernible consumers who demand quality services and are willing to pay for these services. These studies produce convincing evidence to recommend a re-orientation of the Government's role in the delivery of services. These studies recommend:

1. a pro-active involvement of NGOs and other stakeholders for sensitising poor communities, training community based health workers for minor treatments, providing drugs and supplies on cost in areas where private distribution network is weak, providing extension advice related to animal husbandry including feeding practices, shelter innovations, etc.,
2. a strengthening of public good services such as disease prevention and control, surveillance, sanitary control, food hygiene, monitoring and enforcement of food safety standards, and overall policy development.
3. the creation of a conducive environment to facilitate emergence of a private veterinary practice in areas where sufficient demand exists, and
4. a more direct role for the Government in relatively marginal areas with high poverty incidence, poor market access and generally low educational levels,

In addition, a number of alternate models have been tried in many parts of the



An effective Multi-tier consultative process begins at village level – farmers of Hajilapur participating in the first tier consultation

1. Ahuja, Vinod (Ed). (1999) Workshop on Commercialization of Livestock Health and Breeding Services in India: Papers and Proceedings, IIM, Ahmedabad; The World Bank, Washington DC; and SDC, Bern.

Ahuja, Vinod et al. (2000) Agricultural Services and the Poor: Case of Livestock Health and Breeding Services in India, IIM, Ahmedabad; The World Bank, Washington DC; and SDC, Bern.

Ahuja, Vinod and Sen, Arindam, 2002. Livestock Service Delivery and the Poor: Case of Rural Orissa, IIM, Ahmedabad.





country to provide animal health and breeding services to poor farmers more effectively. Some of these include:

1. The milk producers cooperative societies, particularly those set up on the 'Anand Pattern' provide animal health and breeding services at the village level. The functionaries of cooperatives-Secretaries /helpers - are trained in skills required for performing AI and Veterinary first aid. Veterinary graduates make periodic visits and attend emergency calls.

2. In the DANIDA assisted Livestock Development Project in Tamil Nadu, the concept of 'Link Workers Couple' has been successful in providing veterinary first aid, vaccination, de-worming of animals and de-ticking/de-lousing of fowls and popularisation of no-cost/low-cost technologies like termite harvesting for poultry feed, pod feeding for small ruminants, etc. These services are home delivered to farmers by LWC on service charge basis. The LWC acts as a link between farmers and veterinary surgeon/veterinary dispensary.

3. 'Gopal' in Rajasthan and 'Gopal Mitra' in Andhra Pradesh have been employed to provide services. 'Gopal' a trained village youth in Rajasthan provides AI services at the door steps of farmers on a custom charge basis. Similarly, 'Gopal Mitra' provides AI, Vet. first aid and vaccinations on a chargeable basis in Andhra Pradesh.

The CALPI Programme of SDC, PPLPI of FAO and the GoAP (Government of Andhra Pradesh) jointly modelled a project



Farmers of Hajilapur village in Mahboobnagar district in the midst of a consultative process

which initiated the process of reflection and assessment of the effectiveness of livestock services delivery system in Andhra Pradesh by bringing together individual farmers, farmer groups, NGOs, students of Veterinary Colleges and functionaries of the Government by encouraging and facilitating an open dialogue. The project functioned under the overall guidance and supervision of a Steering Committee set-up by GoAP. Under the aegis of this project, five district and eighteen village level consultations were organised at various locations in Andhra Pradesh—Musapet in Mahbubnagar, Chittoor in Chittoor District, Annavaram and Rampachodavaram in East Godavari district and some selected villages in Nalgonda district. The purpose of these consultations was to bring together the farmer groups, NGOs, State and District level functionaries of the Government and encourage an open discussion on the status of livestock services delivery and the need for reforms. The consultations were usually organised by the District administration, facilitated by SMILDA and guided and supervised by the CEO, APLDA and the Additional Director (AH), Production. The financial and technical backstopping support was provided by CALPI and PPLPI.

The consultations at Musapet, Chittoor and Annavaram, were structured in two parts: (a) a half-day participatory, rapid appraisal in selected villages of the district by groups of professionals to study and review the present status of livestock production, delivery of services and elicit farmers' perception on the types of reforms required and, (b) a two-day series of interactive plenum and group discussions amongst various stakeholders participating in the consultation to arrive at a consensus on these recommendations. The consultations in Rampachodavaram and Nalgonda were of a shorter duration and were focused on understanding the needs and problems of tribal households and sheep and goat rearers respectively. The next section presents the proceedings of the various consultations.





Proceedings of Consultations Held at Various Locations

Musapet, Mahbubnagar

Preparations for village visits and subsequent discussions started one day before the consultations. A meeting of professionals was held for this purpose from DAHD, APLDA, SMILDA, NRMPA, PPLPI, CALPI and the Project Consultants. The meeting commenced with the opening remarks from the CEO, APLDA and a briefing on the objectives, scope and layout of the Workshop by the Team Leader PPLPI, (South Asia). Five groups of the Officers of the Department of AHD, APLDA, SMILDA and PPLPI-CALPI Team were formed. The Group Leaders were provided with a Questionnaire for guiding their discussions during the visit to a village. The questionnaire had two parts: part 1, dealt with basic statistics and attributes of the village; and part 2, dealt with livestock services delivery currently available to the village. Names of the selected villages and some basic village characteristics are given below:

All Groups started their village discussions early morning, 17th December 2003. The discussions involved five to six hours of interactions with a cross-section of village communities comprising of dairy farmers, shepherds, backyard poultry farmers, women self-help groups, velugu borrowers and land-less labourers, both men and women. All groups continued their separate internal discussions in the evening and prepared group reports and presentations the next day.

The workshop held at Musapet in Mahbubnagar district was participated by 84 stakeholders which included about 37 professionals, animal husbandry

specialists and service providers besides farmers, representatives of women's groups, dairy cooperatives and breeder's associations. About 21 women farmers formed part of the group. Five group presentations were made during the village visits on the 19th December 2003. Each presentation contained a brief description of the attributes of the villages visited (Annex I, II, and III). A summary of these attributes, the salient points of the presentations and the following discussions are presented in the following paragraphs.

All villages were accessible by motorable roads and had established schools (Upper Primary to High School level). One village had a veterinary dispensary, one a rural livestock unit, one had a Gopal Mitra and two had Sangha Mitras. One village had both a Gopal Mitra and a Sangha Mitra. All five villages had telephone links and power supply. All villages had women's self-help groups, often more than one (as high as 20 in one), functioning as thrift and saving societies and providing instant cash credit to their member households. The most critical issue for all villages was the scarcity of water for irrigation in varying degrees and therefore agriculture in all of them was rain-fed. Three of the villages had Dairy Cooperative Societies, two had milk collection centres (un-registered societies) and all of them had, in addition, milk traders operating from the village. Small ruminants were traded in the villages to visiting traders and to a lesser extent in the nearby Mandal Markets when local supply exceeded the demand. Sale in Mandal Markets was often a distress measure as traders

Village	Mandal	Nearest Town	Distance from town (Km)	Village characteristics
Hajilapur	Deverkadra	Deverakadra	5	No Veterinary services except for breeding bull
Nandipet	Addakula	Mahabubnagar	35	Gopal Mitra
Kodgal	Jadcherla	Jadcherla	12	Veterinary Dispensary
Solipur	Khillaghanpur	Wanaparthy	19	Rural Livestock Unit
Konded	Jadcherla	Jadcherla	12	No Vet. services provider





Sub-group discussions are always interesting and lively - a discussion in Mahbubnagar

operating in such markets often colluded among themselves to keep the prices low. Three of the villages had sheep breeders' cooperative societies although none of these societies were involved in the marketing aspects.

All five villages were well-endowed with livestock of almost all economically important species. Sheep were the most pre-ponderant species in all villages with a widely varying individual holding size—smaller holdings of 10-20 heads by marginal farmers and larger holdings of 100-250 by medium and large farmers. But, less than 10 percent of the total households accounted for all sheep in the village. Backyard poultry made up entirely of desi-fowls were next in terms of population size, widely held by over 50-90 percent of the households in different villages. Average holding size of poultry varied between 2 to 15 birds. Milk production was the most important income generating activity in all villages: over 40-60 percent of all households

owned one milch animal (two rarely)—cows or buffaloes, or both in some cases. There were also a small number of high yielding crossbred cows in the villages.

Work animals, predominantly male cattle and some male buffaloes, are owned by over 50 percent of all households, average holding being one bullock and rarely two. Goats are few but widely held by a large number of households in all villages; even though goat farming is generally discouraged by the State Government as well as the village communities, as they believe that goats degrade the ecosystem. The sole exception to this view was village Hazilapur, where the community resented the Government imposed restrictions on goat farming as they were convinced that goat farming is far superior to sheep farming as a means of livelihood for them. Pigs were few and were owned almost exclusively by the socially weaker sections of all villages. A sample of the livestock numbers and households owning them specie-wise in one of the villages is shown in Fig 1.

Except for Lingampet-Kodgal, no other village had a veterinary dispensary. Village Nandipet had a rural livestock unit. In the case of the remaining three villages, veterinary institutions were at distances varying from 3 to 10 Kms. Livestock owners in villages which had veterinary dispensary or rural livestock units had access to veterinary services, but animals had to be taken to the institution for availing the services: veterinary as well as AI. Even in villages with veterinary institutions, there were serious problems in the area

of preventive veterinary care. Small ruminants and backyard poultry require vaccinations at frequent intervals, but even in villages with veterinary institutions, vaccinations were usually confined to a single round in a year. Heavy loss of sheep and poultry to diseases were reported as a major problem in all villages.

Fig 1: Livestock Numbers & Holding: Villages: Kodgal-Lingampet



Source: Village PRA on 17.12.2003





There were serious complaints about the poor success rate of AI in all villages. Even in Lingampet-Kodgal where there is a veterinary dispensary and where AI Services have been available for the last 15 years, the total number of crossbred cows was only 30 out of a total cow population of 374.

Fodder availability in all villages was acutely scarce. Farmers tend to ration their home grown crop residues for optimum use: large ruminants receive priority for crop residues and milking animals in addition receive some supplementary feeding made up of a combination of home-grown crop by-products like bran and purchased raw feed ingredients like oil cakes or solvent extraction meals. Work bullocks too receive crop residues regularly and some supplementary feeding (bran, solvent extraction meals) during the working season. Work animals are used only for a few days in a year (60-100) for tilling as well as for transport. Arrival of tractors and tractor-drawn farm implements in villages has gradually started to reduce the dependence on work animals in all five villages. There is no cultivation of fodder crops in any of the five villages on account of water scarcity even though farmers are aware of the importance of feeding green fodder and also of the existence of high yielding fodder crop varieties.

Livestock farmers in all villages were keen on acquiring the skills and technologies to improve incomes from their household livestock enterprises. There was a high demand for village level skill training as well as for off-village exposure visits and classroom training for knowledge acquisition. Door delivery of livestock services, particularly AI, was an oft-repeated demand of livestock farmers in all villages. In addition, farmers were keen to have sustainable village-based mechanisms for the home delivery of basic livestock services (like veterinary first aid, deworming, deticking, etc.) which they need constantly for the day-to-day management of their livestock and backyard poultry enterprises. They were willing to participate in setting up

such mechanisms as community driven operations. All five village communities were willing to pay for such services.

The plenary session also enabled Farmer Leaders and Farmer Organisations to share their experiences with the workshop participants on issues related to collective action for the marketing of livestock produce, product quality standards, pricing of products, technology transfers and services delivery. President, Mehbubnagar Sheep Breeders' Association, emphasised the need for sheep breeding societies entering live animal marketing for meat in order to ensure fairer terms of trade and a quality-based price setting for meat animals. He also suggested the initiation of capacity building programmes for sheep breeders (breeding and management of sheep) with the help of the state department of animal husbandry. The need for preserving/improving common grazing lands for small ruminants in villages through a joint forest management was considered by him as an essential requirement to support livelihoods of the sheep breeders. The Chairman, Mehbubnagar Milk Union, advised milk producers to directly deal with dairy cooperative societies instead of through middle-men to supply milk. He insisted that this would safeguard the original quality of milk supplied by them to the society. The chairman also wanted a greater participation of the members in the day-to-day management of their respective society activities like daily quality testing of every sample of milk



Topic wise small group discussion in progress





poured in the society. The milk producers were however agitated by the extremely low-prices paid by the cooperative societies, compared to private trade.

Both the Chairman, Milk Union and the President, District Sheep Breeders' Association wanted their organisations to initiate an independent livestock service delivery mechanisms outside of the Government as a support to production by their members.

This session also witnessed a presentation on the origin and evolution of livestock services, their economic classification and their delivery by Prof. Vinod Ahuja, Team Leader, PPLPI (South Asia).

Farmer representatives intervening in the discussion asserted that there is a total neglect of desi-fowls in the backyard units even though a single hen has the potential to give its farmer an annual return of Rs.1000 without any out-of-pocket expenses, provided basic services like first-aid and timely vaccinations can be made available. There were also complaints from the participating farmers that because of the lack of preventive veterinary care, heavy mortality amongst backyard poultry in all villages is a common feature.

Following the plenary session, participants were again re-grouped into five new groups to discuss issues identified during the village visits and the following plenary presentations and discussions. Each group was assigned a separate theme for group discussion from the following topics:

1. Animal Health Services;
2. Breeding Services;
3. Promotion of Feed and Fodder Availability;
4. Marketing of Livestock and Livestock Products; and
5. Improving Access to Credit.

The Groups met and deliberated on the themes entrusted to them and presented their reports in the plenary on 18th December 2003. A summary of presentations and subsequent discussions are summarised below.

Animal Health Services

While access to livestock services in villages where veterinary institutions exist was assured, farmers resented the need to take their animals to the institutions for availing the services as it costs them money and time. Farmer representatives participating in the Workshop pointed out those veterinary institutions in villages often did not receive supplies of medicines and consumable for treatment, except for a token supply annually. Therefore, they recommended that the Government-employed veterinarians and livestock assistants should be allowed to home deliver veterinary and AI Services along with all required medicines and consumable. A large majority of farmers expressed their willingness to pay for these medicines and services.

As basic services like first aid, vaccinations and de-worming are constantly needed in the day-to-day management of their livestock enterprises, it was emphasised that there is a need to set up community-driven, village-based livestock service delivery systems outside of the Government (like Gopal Mitras). Farmers are willing to pay for the services of such a community service provider.

The Workshop recommended that as the institution of Gopal Mitra has already been introduced in Andhra Pradesh Villages and as they are found to be effective in home delivering minor veterinary services and AI, establishing Gopal Mitras for a cluster of adjoining villages would be



A plenary discussion in progress in Mehbubnagar





a good solution to the problems linked to livestock services delivery at the grassroots level. However, there is a need to streamline the concept of community livestock services provider to one single model. As the Gopal Mitra has emerged as a successful model, all agencies and projects in Andhra Pradesh should draw lessons from this approach.

As a measure for the sustainability of the Gopal Mitras and for their integration in the village communities, it was recommended that Gopal Mitras should themselves be livestock farmers and as far as possible should be selected from amongst the young livestock farmers (both men and women). They will then have independent incomes as livestock farmers and additional incomes from their services delivery. It will also ensure complete integration of the arrangement with the village community.

As there was a considerable variation in the performance, output and earnings of the existing Gopal Mitras, it was recommended that a comprehensive study be carried out on the technical, social and economic dimensions of the system to help re-design the approach, structure

and training of Gopal Mitras. It was also recommended that CALPI-PPLPI should take up this study in consultation with the APLDA and the State Government.

Farmer representatives in the Workshop emphasised the need for a well-planned and comprehensive preventive veterinary care in villages for loss reduction and risk minimisation and recommended a participatory preventive veterinary care programme in AP villages, with cost sharing between the state and the livestock farmers. They also emphasised the need for strengthening regulation to ensure the quality of medicines in the market.

The group assigned to this theme also discussed the issue of responsibility and financing of various types of health services. The recommendations emerging from their analysis are given below:

Breeding Services

Farmer representatives participating in the Workshop confirmed that door delivery of AI has considerably improved the AI success rates (pregnancies) and therefore recommended that door delivery should become a standard practice for AI Services

Roles and responsibilities for the delivery of animal health services

Type of service	Who should provide?	Who should pay?
First Aid	Community/link Worker	Farmer
Special Treatment	Private (Government in marginal areas)	Farmer (some cost sharing required for marginalised groups and areas)
Vaccination	Community link worker/Private	Farmer (except in a contagious disease)
Medicine Supply	Private	Farmer
De-worming	Community Worker/Farmer	Farmer
Quality Control	Government	Government
Quarantine, Control & Public Health	Government	Government
Sanitation and Disinfection	Farmer/Community	Farmer/Community
Training Programmes	Government/NGOs	Government/Farmer/Community
Extension Programmes	Government/NGOs	Government/NGOs
Disease Diagnosis	Government/Private	Government/Farmer
Disease Surveillance	Government	Government





Animal health service is scarce to receive in remote resource poor villages

in AP. They appreciated the services of the Gopal Mitras and recommended that incentives to Gopal Mitras for quality output should be considered to encourage them in their practice.

There was a concern about the absence of breeding services in poorly endowed areas where AI is normally not promoted by APLDA/DAH and the Group therefore suggested introduction of good quality breeding bulls for natural service in such areas.

As a pre-requisite for the door delivery of AI in villages, it was recommended that Service Crates for restraining animals for AI should be established in all villages as part of the infrastructure build up for AI with financial help from the DRDA/DPAP, Department of Rural Development etc. It was recognised that there was a need to initiate a series of awareness building measures since there was low-awareness amongst the farmers on heat detection, postpartum care, nutrition, and overall management of crossbred cows and bulls. With respect to small ruminants, it was pointed out that genetic improvement amongst these animals cannot be confined to supply of a small number of Rams and Bucks by the Department of Animal Husbandry as the need for these would be much larger in an effective breeding programme. The Workshop therefore recommended the initiation of a massive capacity building programme by the Department of Animal Husbandry among the small ruminant breeders through their cooperative societies/NGOs

to enable them to select Rams and Bucks from their own flocks and use them for improvement of their flocks. Further, the Sheep/Goat Breeders' Societies should identify progressive breeders from amongst themselves and especially train them with the help of the Agriculture University as "Breeders of Seed Stock" for supply to other breeders as a commercial activity.

Promotion of Feed and Fodder Availability

Acute scarcity of water for irrigation in all villages in the area and in Andhra Pradesh in general, except for the coastal region, was recognised as a practical reality. The group therefore recommended promotion of innovative approaches for enhancing feed and fodder supply that is now available to the farming community and the state for ameliorating the fodder crisis in the state. The Group felt that to begin with, the state should review the options and choices available in fodder varieties best suited for the state like drought tolerant grasses, shrubs and fodder trees, for large-scale introduction and promotion in the state.

As crops wherever cultivated, receive water from some source or the other, the Group recommended the promotion of "crop border plantation" of suitable varieties of perennial grasses and legumes in the crop fields. As a chronic drought-prone state, the Group also recommended that the state should conserve and enrich all available dry fodder (crop residues) in the state through Industrial-scale technology application for enrichment and pelletisation/briquetisation (straws/stovers/crop thrush) for making inexpensive complete feeds.

The Group recommended that the state should also access, enrich, pelletise and store as a measure for combating drought and ameliorating the feed/fodder crisis, crop residues available even in neighbouring states like Madhya Pradesh, where millions of tons of wheat straw are not normally fed to ruminants, but are burned in-situ as a means of disposal.





The group felt that a massive campaign for building awareness and empowerment of livestock farmers in the state needs to be initiated for adopting these innovative measures (promotion of fodder trees, crop border plantations and complete feed) for increasing feed/fodder availability. Such a program can be initiated by identifying and promoting credible NGOs to spearhead such a capacity building and empowerment programme with the Department of Animal Husbandry functioning as the nodal agency.

Marketing of Livestock and Livestock Products :

Milk marketing in many villages is through Dairy Cooperative Societies/Milk Collection Centres affiliated to their District Cooperative Milk Unions and the Andhra Pradesh Dairy Development Ccooperative Federation (APDDCF). However there were many complaints from member producers on the manner in which these Societies/Centres are functioning and of the producer price paid by the societies to the members. Generally, the price offered by cooperative societies was somewhat lower than that offered by private traders. There were also several irregularities in the testing procedures which, in turn, affected the price received by the farmers.

Significant discussions took place on the issue of milk marketing. It was evident that this was one of the most important issues on the minds of farmers. After much discussion, the group recommended that member participation in the day-to-day management of the DCSs should improve and that members should be involved in testing milk. Many of the farmers claim that unadulterated buffalo milk that they pour into the society, often tests very low Fat and SNF, leading to a very low price that they receive (Rs.7-8 per litre of buffalo milk).

There is no organised market mechanism for sheep and goats. The entire trade takes place through informal channels and there are wide fluctuations in the prices offered to the farmers. After much discussion, the group recommended that

the existing Sheep Breeders' Cooperatives and their district association should expand their activities to serve the sheep breeders better, particularly in the area of marketing of live animals, supply of inputs and breeding for genetic improvement. These activities will also enhance the societies' ability to generate a larger income leading to the viability of the societies.

The Workshop identified control and prevention of diseases as the most critical input required by backyard poultry farmers: prevention and control of diseases will reduce mortality, generate marketable surpluses of table birds, and enhance household incomes from backyard poultry. The Workshop therefore recommended that comprehensive control and prevention of poultry diseases through community managed, village-based, paid service providers should be a priority activity to be promoted in all villages.

Credit Service for Livestock Enterprises

The Workshop recognised that in small-holder production system, credit is another very critical input. It was noted that institutional credit available to the livestock sector is all short or medium term loans and that access to institutional credit involves procedural wrangles and in-ordinate delays.

Farmer perception on credit made it clear that livestock farmers need more cash /micro credit for their day-to-day management of household enterprises (working capital) and that no institutional mechanism exists for giving them this cash/micro credit. It was pointed out that even Kisan Credit Cards deny livestock farmers access to cash credit while as a mixed crop-livestock farmer the same farmer has access to cash credit through their Kisan credit card for the crop production inputs.

The Workshop noted that women's self-help groups have emerged as effective institutions for providing instant cash





The sub-group discussions in Mahboobnagar highlighted the farmer's priority for credit

credit for livestock production and that they have a very good track record of credit supply and timely recovery. The Workshop therefore recommended that immediate action should be taken by the State Government to include cash credit for livestock production inputs under the Kisan Credit Card Scheme. In addition, promotion of women's self-help groups in all villages as institutions for instant cash/micro credit for livestock production should be promoted as a part of all livestock schemes and programmes under the Department of Animal Husbandry, Department of Rural Development and other Government schemes and programmes.

Chittoor

Participants to the second Workshop in the series, at Chittoor, met at the Chittoor Multipurpose Social Service Society (CMSSS) Centre in Durganagar Colony in

the evening of 27th February, 2004 for preliminary interactions on the following day's visit to the selected villages. The six villages chosen for this purpose by local organisers are listed in the table below. After mutual introductions, a brief welcome address was given by Dr. Ramalinga Raju, CEO APLDA and a brief presentation of the Workshop background and objectives by Prof. Vinod Ahuja. Six groups were formed for village visits from among the participants made up of Officers of the State Department of AH, APLDA, SMILDA and the PPLPI-CALPI Team. The local organisers had in advance collected basic statistics in the agreed questionnaire for each of the six selected villages and these were handed over to the respective Group Leaders.

Village visits started early on the 28th morning and continued till late in the day for all groups. Groups saved some time as local organisers had already collected statistics for all villages. All Groups spent sufficient time meeting a cross-section of the village communities (dairy farmers, shepherds, backyard poultry farmers, women self-help groups, velugu borrowers and landless labourers) and discussed issues with them over a four to five hour period. All groups continued with their separate internal discussions in the evening and prepared group reports and presentations for the next morning.

Group and Plenary Discussions:

The district level workshop in Chittoor was participated by 109 participants which included farmers, representatives

Village	Mandal	Distance from nearest Town (Km)	Services Delivery Institutions
L. B. Puram	Bangarupalem	6	Rural Livestock Unit of AHD
Vanadurgapuram	Palasamudram	51	No Institution
Vepulabailu	Peeleru	5	No Institution
Reddivaripally	Peeleru	4	No Institution
Budithireddipally	Yadamarrri	13	Gopal Mitra (APLDB)
Jarawaripally	Palamaner	7	JK Trust Gopal
Chindepally	Yerpedu	20	RASS CentreA





of women SHGs, professionals, service providers and various other stakeholder categories. The first plenum of the Workshop started with opening remarks by Prof. Vinod Ahuja, followed by a briefing for the participants by Dr. Piedy Sreeramulu Adl. Dir., AH and a welcome address by Dr. Ramalinga Raju. The participants were made up of farmers, both men and women, representatives of NGOs, JK Trust, RASS, Women Self Help



When it comes to the reach of livestock services in remote villages, the farmers have strong grievances

Groups, Gopals, Gopal Mitras, Officers of the Department of AH, APLDA and the PPLPI-CALPI Team. Each of the six groups presented their village findings. A summary of these presentations and the discussions that followed, appear in the following paragraphs.

All villages were accessible by motorable roads and had established schools (Primary and Upper Primary). Only one village had a departmental institution—Rural Livestock Unit (RLU), three villages had services delivery by one of the following: a Gopal Mitra (APLDA), or the JK Trust Gopal, or by the RASS (Local NGO). Two of the surveyed villages had no services delivery institution. All six villages had telephone links and power supply. All villages had women's self-help groups, often more than one, most of them functioning as thrift and saving societies and providing instant cash credit to their member households.

The most critical issue for all villages was the scarcity of water for irrigation

in varying degrees. Agriculture in all of them was rain-fed, but rainfall scanty and irregular. The main source of irrigation was bore wells in all villages, but the limiting factor was irregular and inadequate power supply. The main crops however were sugarcane and mulberry for sericulture: both crops need a very high-intensity irrigation. Modernisation of agriculture and opening up of the farmer's options of alternate high-value crops like ground nut and fodder for milk/mutton/chevon production with the available water are yet to reach these villages.

All villages were well-endowed with livestock. Cattle were the most preponderant species. Among cattle the overwhelming majority was improved, high-yielding, crossbred cows. Over 90 percent of the households own crossbred cows (except in Chindepally) and dairying is the major source of livelihood in all six villages. In Chindepally, Buffalo was the main dairy animal. Backyard poultry made up entirely of desi-fowls were the next in terms of population size, widely held by over 90 percent of the households (except in village L.B. Puram), but the villagers themselves are yet to realise the livelihood potential of this backyard poultry system based entirely on desi-fowls. The birds are big, yield 60 eggs per year and the average holding size varied between 2 to 15 birds. The village communities use the birds and their eggs mostly for home consumption. Sheep and goats exist in very small numbers and are confined to an extremely small number of households among the landless and marginal holders (exception: village Vepulabailu with 1200 sheep: sheep husbandry in this village is the second major livelihood activity after dairying). Buffaloes were few in these villages except in Chindepally.

Three of the villages had Dairy Cooperative Societies, but all of them are defunct now. One village had milk collection centres (five in all and owned by five different private dairy companies) and all of them had milk traders operating in addition. Milk prices are low: Rs.7-8 per litre, artificially kept low by vested interests.





Small ruminants were traded through middle men visiting the villages or in the nearby Mandal Markets. One village had a Sheep Breeders' Cooperative Society, but the Society is not involved in marketing of live animals.

As livestock is a major source of livelihood and agriculture operations are limited due to the scarcity of water, work animals exist only in small numbers in these villages. Work animals are predominantly male cattle and are owned by a small number of households in the village (some 15 percent of the households), average holding being one bullock and rarely two. Pigs were few and were owned almost exclusively by the socially weaker sections in all villages. A sample of the livestock numbers and households owning them species wise in one of the villages is given in Figure 2. Figure 3 presents the holding pattern of livestock by the different land holding categories in the same village.

Livestock services delivery in all six villages focuses on large ruminants exclusively. High mortality among small ruminants

and desi-fowls due to epidemics (PPR/RD) is a recurring feature even in villages where resident Gopals, Gopal Mitras, RASS Centre and RLUs of AHD exist. Farmers reported heavy annual losses as one of the major reasons why they have not ventured for backyard poultry production as a livelihood support mechanism. Minor veterinary services to large ruminants like first aid, de-worming, de-ticking/de-lousing and castrations as well as AI are home delivered by the Gopal Mitras, Gopals and RLUs.

While Gopal Mitras and Gopals charge for the services that they deliver and the farmers appreciate the access, quality and effectiveness of these services, they were unhappy about the need to pay for these services. RLUs of the Department of Animal Husbandry (farmers have to pay for medicines and consumable) and the RASS in Chindepally provides free services to village communities. Under the Janmabhoomi program, farmers receive preventive vaccinations for their livestock in all villages. However, this does not

impact the endemicity of diseases since vaccinations are not according to the frequency requirements, particularly in case of poultry diseases.

Veterinary hospitals and dispensaries under the Department of Animal Husbandry are far away from the visited villages. A few of

Figure 2: Livestock Numbers & Households owning them: Village Jarawaripally

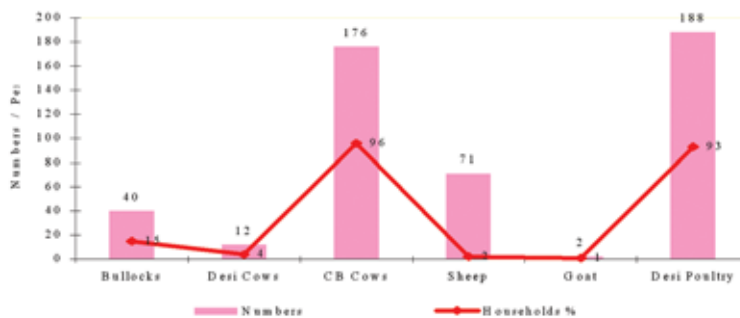
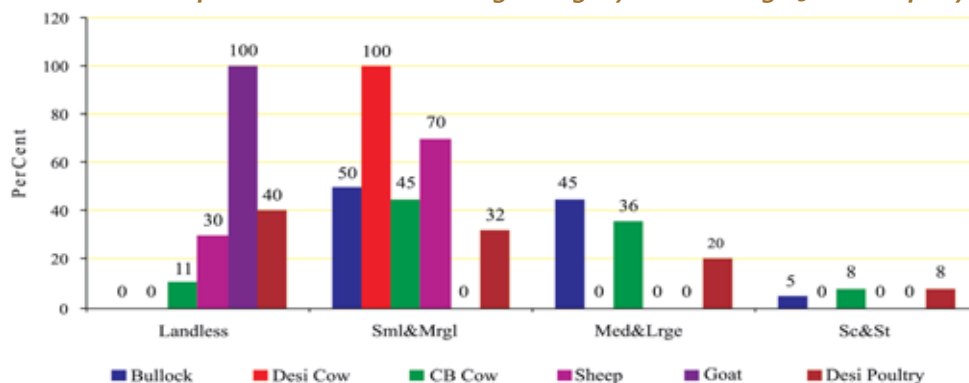


Figure 3: Distribution of Livestock: Land Holding Category wise: Village Jarawaripally





the village communities reported that it is quite expensive to get a veterinary doctor or a livestock assistant from the distant AHD institution to the village for an emergency. The villagers are therefore happy with the village based mechanism for delivery of basic services like those by Gopal Mitra, which the APLDA and GoAP are promoting. However, it was quite clear that while the farmers would welcome the delivery of minor veterinary dispensations by the village-based para-professionals, they insist on the services of a qualified Veterinary Doctor at their door-step for major veterinary services, as they cannot afford to leave their costly high yielding animals (crossbred cows) to the tender mercies of Para-vets of any kind. All of them were willing to pay for veterinary services, home delivered by qualified Veterinary Doctors.

The plenum then devoted some time to identify major issues that emerged during the village visit presentations and identified the following as key issues for further discussions:

- (i) Breeding Services
- (ii) Credit and Insurance
- (iii) Animal Health Services
- (iv) Marketing
- (v) Feeds and Fodder
- (vi) Other Issues (not covered above)

Six Groups were formed from amongst the participants and each group was given one issue for a focused discussion during the afternoon session. The leader of each group presented the group findings in the Plenary Session next morning.

Group 1: Breeding Services

Breeding services for cattle and buffalo come from several agencies: APLDA, AHD, JK Trust, Heritage Group and RASS. These services are all home delivered except in the case of AHD where services are provided at the AI centre. The services are charged by all providers and charges for AI, range from Rs. 20 to Rs. 35. The Group identified the following salient points

about the present status of breeding services in the area:

- Nearly 60 percent of the breed-able cows are covered under AI.
- The exotic blood level of local crossbred cows has crossed 70 percent because of forward crossing with the exotic parent.
- There are many mis-conceptions amongst farmers about AI.
- The concept of self-help insurance groups has started in the area.

Suggestions/Recommendations by the Group

- Organisation of monthly gynaecological camps with the help of experts for treating problem-breeders and to reduce infertility.

Awareness camps/training of farmers with the help of Agricultural Technology Management Agency (ATMA), DRDA, AHD, and APLDA.

- Use of half-bred bulls with a high pedigree (progeny tested if available) for AI to stabilise exotic inheritance in the population.
- Home delivery of AI to improve conception rates.
- Improved communication facilities (telephones) to Gopal Mitras.

Group 2: Credit and Insurance

The Group recognised credit as the most critical input for livestock production in Andhra Pradesh. Inadequate credit has circumscribed the smallholder's potential for a viable livestock production system. Access to good quality credit can enable half the subsistence farmers access to technologies/skills and would enable them to cross the poverty line and become viable farmers. The group also recognised women's self-help groups in villages as the best institutional set up to provide credit to livestock farmers: both cash credit and term loans. The Group realised that concessional premium rates are now applicable only to Government supported





scheme animals and that farmers have to pay much higher premiums for insuring their private animals. The Group after discussions arrived at the following suggestions/recommendations:

- Livestock farmers need access to working capital from time to time for running their household livestock enterprises and therefore the Group recommended that Kisan Credit Cards should include credit for livestock production inputs as well.
- WSHGs should be enabled to handle term loans for livestock purchase as this is the simplest solution for accessing loans and repaying them. Also, they should simplify the procedures for term loans for animal purchase, enabling speedy loan sanctions and release.
- The Group recommended that commercial banks should limit the level of collaterals for term loans for animal purchase to the value of the loan.
- The Group appreciated the existing schemes for credit to common interest groups, rythu clubs, etc. and recommended that the farmers and their services agents like Gopal Mitras (for mobility) should make use of such facilities for the common benefit of the rural communities.
- To take advantage of lower premiums and to distribute the risk of fraudulent practices across the community, the group recommended the introduction of group insurance of cattle in villages as practiced in Gujarat milk-shed areas.
- The Group recommend the popularisation of the package insurance scheme offered by the public sector insurance companies for the benefit of the livestock farmers in Chittoor.
- To reduce malpractices in cattle insurance, the Group recommended that insurance companies should introduce animal identification systems using smart chips as permanent and unchangeable identification numbers for insured animals.

Group 3: Animal Health Services

The Group identified the issues for discussion as follows:

- (i) Preventive Veterinary Care,
- (ii) Curative Veterinary Care/Treatment of Ailments, and
- (iii) Public Health.

The group discussed the roles of various stakeholders in delivering these services. These are summarised below:

Recommendations and Suggestions

- Farmers were unhappy that the annual large-scale mortality among small ruminants and desi-poultry are a common feature even in villages where Gopal Mitras, JK Trust Gopals and AHD Institutions exist, as all of them ignore preventive health care of these species. The farmers demanded that all village services providers, should regularly and at the appropriate intervals, vaccinate desi-poultry and small ruminants in all villages that they cover.
- As Gopal Mitras have emerged as the most effective solution for de-centralised low-cost services in villages, farmers wanted the system to be established in clusters of villages all over the state for home delivery of AI and minor veterinary dispensations.
- Farmers however expressed preference for qualified veterinary doctors for relatively complicated treatments. This was because of the fact that they perceived it somewhat risky to let poorly trained para-veterinarians or those with a short-term training to treat their high yielding and costly cross-bred cows.
- Farmers are willing to pay for good quality veterinary services both minor and major, by qualified veterinary doctors. (Four out of the six villages visited were willing to pay while two had some reservations even as they demanded home delivery).
- Farmers from all villages wanted the Government to re-structure their AI and Veterinary services from institution-





Roles and responsibilities for the delivery of animal health services

Services	Who should be done?	Who should pay?
I. Public Health		
Clean Milk Production	Farmer	Farmer
Sanitation & Disinfection	Farmer	Farmer
Disposal of Carcass	Gram panchayat	Gram panchayat
II. Health services		
Training of unemployed youth	Animal Husbandry Dept.	Gram Panchayat/NGOs
Training of Farmers	Animal Husbandry Dept.	
Supply of Medicines	Private sector	Farmers
III. Preventive Health Care		
Vaccination	Trained youth	Farmers
De-worming	Trained youth	farmers
De-ticking	Farmers	Farmers
Supply of Clean Water	Gram Panchayat	
Supply of Feed & Fodder	Animal Husbandry Dept.	Farmers
Animal health camps	Animal Husbandry Dept.	
Clean sheds	Farmers	Farmers
Growing fodder trees in fallow lands	Gram Panchayat/NGOs	GP/NGOs
Disease Diagnostic Labs at Mandal/ District level		

based services to home-delivered inputs.

Group 4: Marketing

The Group first made a thorough analysis of the prevailing situation for the marketing of livestock products in the area. They further identified major issues like the absence among the farmer producers of the willingness to co-operate and the unrestricted manipulations of vested interests. The case of milk marketing, which was discussed, was a classical example of the identified major issues. Chittoor was one of the top milk producing districts in the state. Growing volumes of marketable surplus enabled the Co-operative dairy plant in Chittoor to reach daily collection volumes of over 3,00,000 litres. The highly successful Milk Co-operative Movement in the District was undermined and destroyed by private dairy companies for their benefits. The direct impact was on the milk prices: the private dairy companies manipulated milk prices

to stay within a very low and narrow band of Rs. 7-8 per litre, the lowest price paid anywhere in India. The group therefore proposed the following suggestions and recommendations:

- To approach the NDDDB, Anand for reviving the village dairy co-operative societies systematically and to revive the district milk producers union and Chittoor dairy plant once owned by it.
- All farmers/villages will be asked to supply milk only to the dairy co-operative society owned by the farmers in the village.
- To collectively decide in the co-operative system a dynamic and reasonable milk pricing policy and mechanism, so that farmers receive a remunerative price and earn a livelihood from dairy farming.
- To restructure the sheep/goat breeders co-operative societies in villages where small ruminants are an important livelihood support system and to enable and equip them to engage in marketing





of live animals for meat and as breeding stock.

- To promote meat from small ruminants as a high value crop in irrigated land as an alternative to sugarcane and mulberry (Less water intensive crops with higher monetary returns).
- To train farmers in dairy and small ruminant farming and fodder production skills.

Group 5: Feeds and Fodder

The Group recognised fodder and feed scarcity as the single most critical impediment to livestock production in the area and focused on innovative solutions for the problem. The Group made the following suggestions and recommendations:

- Revamping the cropping policy of the region to gradually phase out extra water intensive crops like sugarcane and mulberry and to replace them with high value but less water dependent crops like ground nut and high yielding perennial fodder and legume crops (Guinea Grass, Napier Grass, Desmanthes, etc.) for milk/meat production.
- Modify the Government policy to enable increasing availability of fodder from forests for conservation and enrichment as pellets (help storage, transport and avoid wastage).
- Conversion of paddy/wheat straw in the state and in the neighbouring states along with small quantities of other nutrients into low-cost complete feed pellets for supply to farmers as a private sector effort on industrial/commercial scale.
- Promote High Value concentrate pellets containing Bypass Protein, Bypass Starch and Bypass Fat as “Top Feeds” (small quantities to be fed over and above complete feeds).

Group 6: Other Issues

This Group discussed issues not covered by the other five Groups as many critically important issues were out of

the purview of these Groups. The Group made the following suggestions and recommendations:

- Promote women’s self-help groups in villages as the most suitable institutional set up for cash credit and term loans to livestock farmers.
- Promote producers’ cooperatives/revive where existing ones are defunct, in all villages, where marketable supply volumes are large enough to support a co-operative.
- Milk cooperatives and small ruminant co-operatives to engage in marketing of livestock, production inputs and in managing the State/District Union’s Breeding Policy for the Species of Animals involved.
- Encourage producers to build up awareness of hygiene and quality of products (eg., clean milk production).
- Put together a package of trainings for farmers to improve their farming skills and exposing them to modern technologies and to change through NGOs/Development Bodies.
- Encourage village services providers to equip themselves with mobility and communication facilities.

Annaram

Participants for the third Workshop in the series at Annaram met in Ratnagiri Resort, Annaram on the evening of 21st July, 2004 for a preliminary interaction on the following day’s visit to selected villages. The five villages chosen for this purpose were identified by CEAD. After mutual introductions, a brief welcome address was given by the District Joint Director (Animal Husbandry), the CEO, CEAD and a brief presentation of the Workshop background and Objectives by PPLPI (South Asia) Team Leader. Five groups were formed for village visits from amongst the participants made up of Officers of the State Department of Animal Husbandry, APLDA, SMILDA, CEAD and the PPLPI-CALPI Team. All the villages identified were in Nakkappalli





Mandal. The villages visited are listed in the table below:

unwilling to divulge any specifics of their trade. There were also a few lady livestock

Village	Distance from nearest town (Kms)	Services Delivery Institutions
Godicharla	Tuni 10 km	Rural Livestock Unit in the Village
Mukundarajupetta	Tuni 15 km	Nil, Village dispensary 1 km away
Donkada	Tuni 13 km	Nil, Rural Livestock Unit 5 kms away
Dosalapadu	Tuni 12 km	Nil, Rural Livestock Unit 2 kms away
Vempadu	Nakkappalli 8 km	Nil, Village Dispensary 4 kms away

Village visits and PRAs started early on the 22nd morning and continued till mid-day for all groups. All Groups had sufficient time to meet with a cross-section of the village communities comprising of both men and women – dairy farmers, shepherds, backyard poultry farmers, women self-help groups, velugu borrowers and landless labourers. They discussed issues with them over a three to four hour period. All groups continued their separate internal discussions in the evening and prepared group reports and presentations for the plenum on the 23rd morning.

health workers trained by Anthra/CEAD, who reported their inability to earn a living on the skills they acquired with the training. On further discussions with them it appeared that they were trained only in vaccinations and in the use of Herbal Medicines/Homeopathy Remedies. No training had been imparted to them on the use of modern veterinary medicines and remedies.

Group and Plenary Discussions

On 22nd afternoon, the participants to the Workshop had a meeting with traditional animal healers, arranged by CEAD. Over 40 of them, both men and women, shared their experiences and the type of ailments for which they could provide treatment, with the participants. They exhibited a fair degree of confidence in their capabilities to provide healing although they were

The Workshop proceedings started on the 23rd morning with a welcome address by Dr. Jayaprakash (SMILDA), followed by brief introductions on various aspects of the Workshop by Dr. Peidy Sreeramulu, Prof. Vinod Ahuja (PPLPI-FAO), Ms. Vijayalakshmi of CEAD, Director, VLDA and Chairman, Vishakha Milk Union. This was followed by five group presentations on village visits. A summary of these presentations and the discussions that followed, appear in the following paragraphs.



How valuable is a kid for the rural poor? A farmer and his daughter in Konded village proudly show their priced possession

All villages were accessible by motorable roads, most of them black-top and had established schools (primary and upper primary). Only one village had a departmental institution (RLU), the other four had to depend on services by veterinary institutions, 1 to 8 kms away from the village. Services provided by these institutions were mostly rated as unsatisfactory by the village communities. Villages had telephone links and power supply. All villages had women's self-help groups, often more than one, most of them functioning as thrift and saving societies and providing instant cash credit





After the initial ice breaking, women contributed immensely to the consultative process on livestock services

to their member households. Two of the villages had dairy co-operatives affiliated to the Vishakha Milk Union (one of them un-registered). In Dairy Cooperative Villages, provision for services delivery had been made by the Milk Union in the form of a mobile veterinary clinic visiting the villages at regular interval, AI services in milk societies and balanced cattle feed produced by the Union's Feed Mill sold at Rs. 5 per kilo. The Union also provided balanced feed for small ruminants on demand.

The main crop was paddy, with milk production as an income support activity. Cultivation of fodder crops was not uncommon in these villages. The presence of the Vishakha Milk Union in the district has helped the promotion of dairy farming. Milch buffaloes are the most

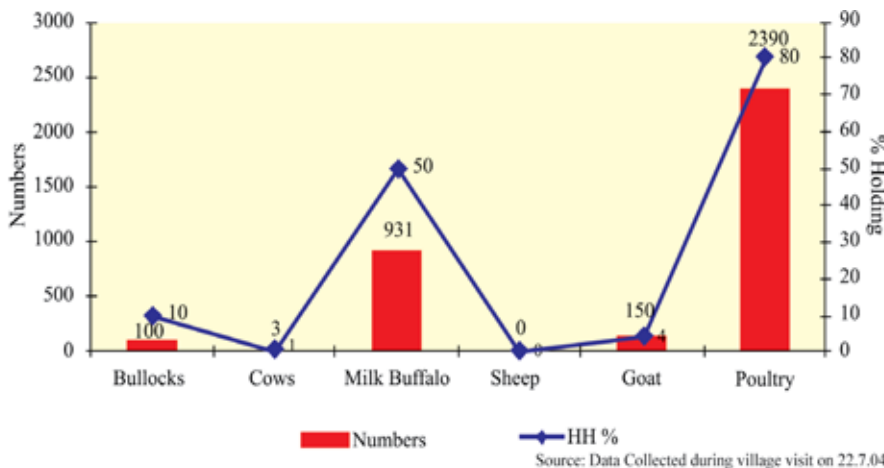
popular livestock in all villages visited.

All villages were well-endowed with livestock: buffalo was the most preponderant species. Milch cattle were few and most of them local breeds. While dairying was a major source of livelihood in some of the villages, in some other villages, farmers raised cows until an advanced stage of pregnancy and then sold them to farmers in other villages with relatively better access to milk markets. This practice was mostly attributed to poor market access for liquid milk. Backyard poultry made up entirely of desi-fowls were the second in terms of popularity, widely held by over 70 percent of the households. But village communities themselves are yet to realise the livelihood potential of the backyard poultry system based entirely on desi-fowls. The birds are big, yield 60 eggs per year and the holding size varied between 2 to 15 birds. The village communities use the birds and their eggs mostly for home consumption.

Sheep and goats exist in very small numbers and are confined to an extremely small number of households amongst the landless and marginal holders (exception: village Dosalapadu with 3500 sheep and 2500 goats: small ruminants were the second major livelihood option after dairying, in Dosalapadu). Two of the villages had Dairy Cooperative Societies, but all villages had milk traders doing a

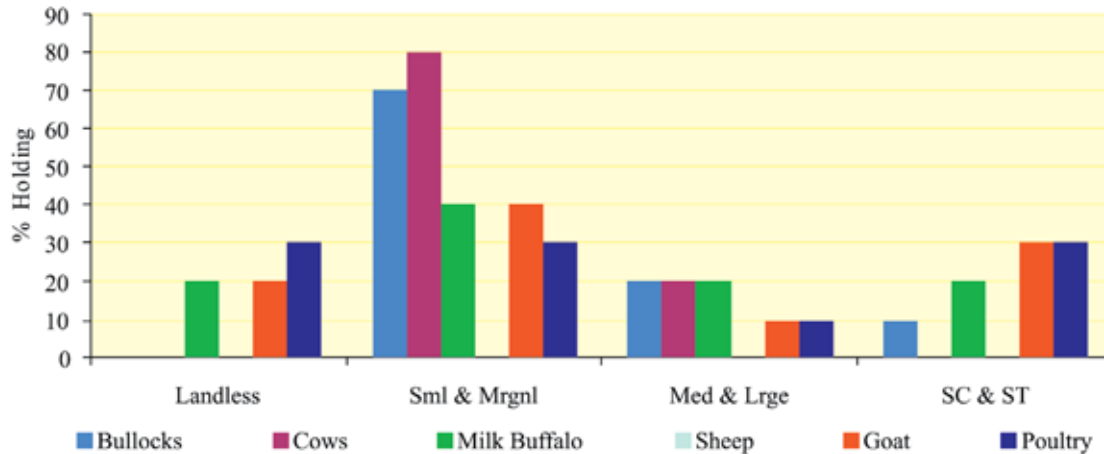
good business. Large numbers of milking buffaloes are present in the villages and a sizable quantity of the milk is traded from almost all of them. Under the influence of the Milk Union and its pricing policy, milk prices in the area were uniform and remunerative.

Livestock Numbers & Households owing them: Village Donkada





Distribution of Livestock: Land Holding Category wise: Village Donkada



Source: Data collected during village visit on 22.7.04

Agriculture is the major source of livelihood and work animals exist only in small numbers in these villages. Work animals are predominantly male cattle and are owned by a small number of households in the village (some 15 percent of the households), average holding being one bullock and rarely two. Farm machinery and pump sets have largely replaced work animals as the principal source of farm power. A sample of the livestock numbers and households owning them species wise in one of the villages is shown in the chart above. The chart below presents the holding pattern of livestock by the different land holding categories in the same village. Marginal and small farmers own the bulk of all species of livestock. Desi-poultry & goats are a major livelihood support to the rural poor—SC & ST and the landless.

Access to livestock services is poor in some villages. In the villages covered by Vishakha Dairy Union, however, service access is far better, but the focus is on large ruminants. Mortality among small ruminants and desi-poultry remains high. Farmers reported heavy losses as one of the major reasons why they have not ventured to backyard poultry production as a livelihood support mechanism. Minor Veterinary Services to large ruminants like first aid, de-worming, de-ticking/de-lousing and castrations as well as AI are home delivered by the Gopal Mitras and

the Milk Union.

While Gopal Mitras charge for the services, they door-deliver and the farmers appreciate the access, quality and effectiveness of these services, they were unhappy about the need to pay for the services though. RLUs of the Animal Husbandry Department provide free services to village communities, at the Centre. However, due to inadequate supplies of medicines and consumables, farmers are often required to purchase medicines from the market. In villages with milk societies, the Milk Union delivers veterinary and AI services at subsidised rates on the doorstep of the farmers.

Group Discussions on Issues Identified by the Plenum

The plenum then devoted some time to identify major issues that emerged during the village visit presentations and the discussions that followed them. The Plenum identified the following as key issues for further discussions during the previous afternoon:

- (i) Animal Health Services
- (ii) Breeding Services
- (iii) Extension Support and Training of Farmers
- (iv) Farm Level Credit and Insurance
- (v) Marketing
- (vi) Feeds and Fodder





Six Groups were formed from amongst the participants and each was given one issue for a focussed discussion during the afternoon. The Leader of each Group presented the Group Findings in the Plenary Session on 24th morning. The recommendations of the Groups are summarised below:

Group 1: Animal Health Services

The Group recognised that the existing veterinary institutions are usually 5-8 kms away from most villages and that the services provided by them are not satisfactory. The institutions are also unable to provide timely services. They receive only a small allotment of medicines from the Department and invariably farmers who approach the institutions receive only a prescription and they have to procure the medicines from the market. The institutions do not receive an adequate vaccine supply and so provide only sporadic vaccinations. Small ruminants and backyard poultry receive no vaccinations at all. In addition to formal modern veterinary service providers, a number of traditional medicine practitioners are also providing services. The Group appreciated the effectiveness of the Gopal Mitras, but emphasised the need to extend their services to small ruminants and desi-fowls in the backyard as an essential requirement. The Group arrived at the following recommendations:

1. Door delivery of veterinary services by qualified veterinary doctors. However, the farmers insisted that the services should be provided by the Government at no cost to them.
2. Provision for door-delivery of AI and minor veterinary services by Gopal Mitras.
3. Regular and timely vaccinations for all species, particularly for small ruminants and back yard poultry (Farmers desire a supply of subsidised vaccines, particularly for small ruminants and backyard poultry).
4. Make full use of the DWACRA trained

village women for poultry vaccination and to train one woman in every village for poultry vaccination, along with providing them access to poultry vaccines.

Group 2: Breeding Services

Breeding services for cattle and buffalo comes from the VLDA, AHD and the Vishakha Milk Union. These services are home delivered except in the case of the AHD where services are provided at the AI centre. The services are charged by all providers and charges for AI range from Rs. 20 to Rs. 35. The group felt that that there is no policy or plan for the breeding and genetic improvement of small ruminants and desi-poultry. The group therefore, arrived at the following recommendations:

1. Gopal Mitras to be trained and positioned in every Panchayat/cluster of villages, ensuring the widest possible coverage of breeding bovines.
2. Regular veterinary Camps in all Mandals to attend to and reduce, infertility among breeding cattle and buffaloes.
3. Introduction of Murrah Buffalo Semen from selected bulls for improving the milking buffaloes in Vizag district.
4. Capacity building of small ruminant farmers to improve their skills and to enable them to participate in a genetic improvement programme for sheep and goats with the help of the Department of Animal Husbandry and the Agricultural University.
5. Starting through Sheep/Goat Breeders' Associations, a campaign for selection and multiplication of superior Rams and Bucks by the farmers themselves and provide the associations technical and financial support for implementing the genetic improvement plan.

Group 3: Extension Support and Training of Farmers

Livestock farmers do not receive any extension support from any source and therefore they have neither recognised the





potential of their livestock for livelihood support nor have they realised the full potential of their livestock in terms of their output. Large yield gaps exist as farmers lack the awareness and skills for exploiting their full potential. The Group understood that this is the current situation across all species of livestock and all farming systems. The Group arrived at the following recommendations to build the farmers capacity and to transfer skills to them for improving the viability of their household livestock enterprises and enhance household incomes:

1. Launch through the Department of AH, APLDA/VLDA, Vishakha Milk Union and NGOs in the region a capacity building and empowerment programme for livestock farmers through Village Based Training (VBT).
2. Persuade the Government of Andhra Pradesh to structure a livestock extension cell in the Department of Animal Husbandry to promote decentralised, independent, village-based farmer-to-farmer livestock extension networks, outside of the Government, involving skilled farmers in the village, women's self-help groups, Gopal Mitras and grassroots level local NGOs.
3. Mobilise grassroots level local NGOs to build training teams and organise VBTs and skill transfers in all villages/ Panchayats falling within their areas of operation and to generate large numbers of skilled farmers to act as the extension constituency for the village and to link them to the Government departments and Rural Financial Institutions for networking through Mandal Veterinary Officers (AHEOs) and Gopal Mitras.
4. Create in every village at least one skilled Lady Animal Health Worker (LAHW) exclusively committed to vaccination of small ruminants and poultry; and provide them with a constant access, through local trade, to poultry/small ruminant vaccines. These trained LAHWs will door-deliver

timely vaccinations for small ruminants and poultry in their respective villages as paid inputs.

Group 4: Farm Level Credit and Insurance

The Group identified farm level cash credit as the most critical input for livestock production in AP. Inadequate credit has circumscribed the smallholder's potential for a viable livestock production. Access to good quality credit can enable half the subsistence farmers access to technologies/skills and would enable them to cross the poverty line and become viable farmers. The group also recognised women's self-help groups in villages as the best institutional set up to provide farm level credit to livestock farmers: both cash credit and term loans. The Group realised that concession on premium rates are now applicable only to Government supported scheme animals and that farmers have to pay much higher premiums for insuring their private animals. The Group after discussions arrived at the following suggestions/recommendations:

1. Livestock farmers need access to working capital from time-to-time for running their household livestock enterprises and therefore the Group recommended that Kisan Credit Cards should include credit for livestock production inputs as well.
2. The Group recommended that WSHGs should be enabled to handle both cash credit and term loans for livestock purchase as this is the simplest and most responsible solution for accessing and recovering loans.
3. The Group recommended that commercial banks should simplify the procedures of term loans for animal purchase, enabling a speedy loan sanction and release.
4. The Group recommended that commercial banks should limit the level of collaterals of the term loans for animal purchase to the value of the loan.
5. The Group appreciated the existing





schemes for credit for common interest groups, rythu clubs, etc. and recommended that the farmers and their service providers like Gopal Mitras (for mobility) should make use of such facilities for the common benefit of the rural communities.

6. To take advantage of lower premiums and to distribute the risk of fraudulent practices across the community, the Group recommended the introduction of group insurance of cattle in villages as practiced in the Gujarat milk-shed areas.
7. The Group recommended the popularisation of the package insurance scheme offered by the public sector insurance companies for the benefit of livestock farmers.
8. To reduce malpractices in cattle insurance, the Group recommended that the Public Sector Insurance companies should introduce animal identification systems using smart chips as permanent and unchangeable identification numbers for insured animals.

Group 5: Marketing

Major organised trading activity in Vizag district covers only milk: Vishakha Milk Union covering nearly 70 percent of the villages and the remaining 30 percent villages are left to private Dairy Companies (Horlicks, Dolphin and Heritage). While the Milk Union pays a remunerative price based on milk quality (Rs.15 per litre), the private companies pay much less (Rs.10 per litre). Farmers are helpless as the procurement areas are notified separately for each dairy by the State Government leaving the farmers no alternative for selling milk. Live animal trade (small ruminants and desi-fowls from the backyard units) takes place mainly in villages and the prices are fair (Rs.100 per kg of live weight for small ruminants and Rs.80 per desi-fowls). The Group recommended the following measures to streamline marketing and to ensure fair trade terms:

1. Strengthen the Sheep/Goat Breeders Associations and promote the formation of an Association where it does not exist.
2. Encourage Breeders Associations to actively participate in the input supply and market facilitation (streamlining marketing); setting up trading norms and price setting based on live weight of animals, without disturbing the existing private marketing channels.

Group 6: Feeds and Fodder

Vizag district is a paddy cultivation area and produces large quantities of paddy-straw which forms the mainstay for milk production in the district. Presence of major rivers in the district assures a high biomass production in the area. The milk union promotes fodder production and supplies balanced cattle feed at reasonable prices. All of these factors make sure that there is a reasonable supply of feeds and fodder for large ruminants in the area. Fodder scarcity however exists for small ruminants as there are both private and the Government imposed grazing restrictions as well as a rapid shrinking of the grazing lands. The Group made the following recommendations:

1. Launch a fodder promotion campaign through the Vishakha Milk Union in collaboration with VLDA, Department of AH and the private Dairy Companies in the district, encouraging dairy farmers to actively engage in an "on-farm" fodder production to support their milk production enterprises.
2. Improve access to fodder and grass seeds/cultivars by encouraging specialisation on fodder seed production by farmers and expanding trade channels for marketing of seeds/cultivars.
3. Seek a relaxation on the Government restrictions on common grazing lands particularly in the hill areas and forests; and encourage feeding of cut and carry grasses rather than grazing in common lands.





4. Skill train and encourage sheep/goat owners to stall feed small ruminants and provide them a package of assistance for stall feeding like: financial support for animal shelters, feeding mangers, chaff cutters, biogas generators and door delivery of animal health services.

Consultation with tribal communities in Rampachodavaram

The LSRI Core Group at its meeting in Hyderabad on June 16, 2004 suggested amongst other things that the LSRI Consultation Process should include consultations with tribal communities on their perceptions and needs related to livestock production in general and on livestock services delivery in particular. Rajamundhry area was chosen for tribal consultations. The CALPI-PPLPI Team along with the Officials of the Department of Animal Husbandary, SMILDA and APLDA visited Rajamundhry and the Rampachodavaram Integrated Tribal Development Project and spent a day with the tribal community visiting one tribal village and then sitting down with a cross-section of the community for detailed discussions. The village visit and the meetings with the tribal households were arranged by Andhra Pradesh Adivasi Aikya Vedika (a tribal network group).

The village visited was "Thilammamidi" near Rampachodavaram. The village was small and had only some 139 households and a human population of 540. The visiting team split into smaller groups and visited different areas of the village and had discussions with small groups of tribal families. The village community, though entirely of tribal origin, had over the years moved away from the tribal culture and life style to mainstream community living. The dwellings were small and were built with ITDP Support. Many among the tribals, both men and women, were wage earners, some on regular jobs with the Government, quasi-Government, and private institutions or households. Most of the households owned livestock: cattle (3-4 male mostly for work/manure and

rarely a cow), small flocks of goat. Desi-fowls were the most popular species and most households owned them in flocks of 5-10 hens and a couple of cocks.

After the village visit, the visiting team participated in a meeting with tribal communities in Rampachodavaram. Most of the participants were from the local area (East Godavari District), and some from Vizag and Adilabad. Several women's self-help group members and office bearers were also part of the gathering. After brief talks, explaining the background and purpose of the Team's visit, Tribal Spokesmen among the gathering briefed the visiting group about the state of the livestock services delivery arrangements in the area. It was then agreed that there is a need for detailed discussions on the issues and it was decided to break the participants into three groups for in-depth discussions. The Groups met separately and discussed the issues for over two hours. The Group representatives then presented the summary of the discussions to the plenum later in the afternoon. A summary of the group presentations is presented in the following paragraphs.

Almost 80 percent of the village communities were made up of marginal land holders, 10 percent landless and the rest small holders. A vast majority of them subsisted on the combined earnings from their land, wages earned through manual labour, sale of livestock and trading in minor forest produces. During the seasons when they are not tied down by agriculture, almost all families in the villages go for manual labour. Wages in and around their villages are very low: Rs. 20-25 per day. During the cropping season the households help each other in the cropping chores and also share their work animals for farm power (the practice is known as "putti"). Work animals are also hired out for work and this fetches a rent of two bags of rice for the season. Many households give out their cows for freshening and take them back after calving (the practice is called "paliki"). Family size was five to seven members per household and usually with more than one





wage earner in a household. Agriculture was the prime occupation along with livestock. The average household income is sufficient only for subsistence and during emergencies they take loans from the WSHGs where they exist or depend on the village money lenders. Many keep livestock as cash reserves and sell them during times of need. Tribal villages usually have several local institutions and people's bodies in them to help in development: Tribal division societies, Girijan Societies and self-help groups are some of them. Education of children often puts the families in great distress and sometimes under great debt burden. In summary, tribal households subsist on a shoe string income and budget, and they cannot afford any extra commitment on their incomes, including payments for livestock services.

Many of the young men and women trained for six months on livestock services by Anthra and CEAD find it difficult to earn incomes out of their skills and services, as the users are not in a position to pay. Almost all trained persons present were idling, unable to practise. Sale of livestock is often to traders visiting villages: prices are approximately Rs. 4,500 per pair of bullocks, Rs.1,200 for a cow, 800 for a goat one year of age and Rs. 80 per table desi-fowl. All households own desi-fowls and use eggs and table birds home produced primarily for home consumption. Diseases and heavy mortality of stock is common particularly among small ruminants and poultry; and amongst calves in the case of large ruminants.

Access to veterinary services is poor, since there are no veterinary institutions in any of the tribal villages or in the nearby areas. At the same time, no

initiatives are taken by the communities or by the Tribal Development authorities for finding a way of using the trained animal health workers available in many villages and compensating them for their services. The tribal Division in Rampachodavaram had in all some eight veterinary dispensaries, of which only four were functional. The other four had no professional staff because of the general staff shortage in the area. In addition, there were three RLUs in the Division. The institutions were far-away from most of the tribal villages and service deliveries to tribal villages are very poor. Home delivery of services by the institutional staff was a very expensive proposition for the tribals. Most households therefore make do without veterinary services, the consequences notwithstanding! Village-based basic service delivery mechanisms and timely home delivery of services alone can help enhance household incomes from livestock.

Consultation with Sheep Breeders Association, Nalgonda

In one of the task force meetings of the project, some concerns were expressed on the existing bias in the livestock sector in favour of large ruminants in matters related to development investments, input supply and services delivery; and desired some fine-tuning of the project to encourage a balanced growth of the livestock sector enabling all economically important species of livestock to develop according to their livelihood intensity.

The task force members pointed out that raising small ruminants' in Andhra Pradesh is extremely livelihood intensive, supporting over 2 million households who depend exclusively on small ruminants for

Conclusions

1. Tribal households in the ITDP Area are extremely poor and follow livelihood practices that enable them to barely manage food and subsistence. They have no elasticity for experimenting with new practices, however good they are in the long term. Special support packages for helping them to outgrow their subsistence livelihood systems are essential to help them become productive livestock farmers.





2. A village-based livestock service delivery mechanism, community-driven but initially paid for by public funds (under ITDP), would be the first step in any development effort. Timely availability of vaccinations and other minor veterinary services will reduce production losses, drastically cut down mortality of livestock, increase output, protect farmer investments and help to appreciably increase household incomes.
3. A massive campaign by the ITDP/AHD involving grassroots level local NGOs to promote women's self-help movement will provide households with an instant access to farm level cash credit, the prime input for small holder livestock production and will lead to a progressively viable household livestock enterprises.
4. A massive campaign by the ITDP/AHD involving grassroots level local NGOs to launch capacity building and empowerment of the village communities will act as the harbinger of change and technology adoption and to establish the foundation for a farmer to farmer livestock extension mechanism - village-based, independent and outside of the Government.
5. As tribal villages are inaccessible, many of the minor services like vaccination of day-old chicks and timely protection against poultry diseases (several rounds of vaccinations of fowls during the year) can be possible only if such skills are available amongst farmers themselves, so that they can access it constantly. It would therefore be essential to impart skill trainings to farmers to promote self-help and self-reliance for individual and community benefit.

a living. The consensus of the Group was therefore to arrange special consultations with shepherds, sheep breeders' associations and people's organisations/NGOs focussing on small ruminant farmers, on the specific problems and special needs of households depending on small ruminants as the prime source of livelihood.

Consultations and interactions accordingly were arranged with groups of shepherds and sheep breeders' associations in Nalgonda district. The PPLPI-CALPI Team, the Officers of the Department of Animal Husbandary, Representatives of the SMILDA and the Officers of the APLDA were exposed to an extremely sensitive street play enacted by members (shepherd community) of the District Sheep Breeders' Union, on the life and travails of the shepherds, one evening. Early morning next day, the visiting Teams and Officers met in Jenkareddygudam village in Nalgonda District for an interaction with a group of shepherds from a cluster of nearby villages, all members of the respective village Sheep Breeders' Associations and their District Union. Later in the forenoon of 4th July 2004, the visiting Teams and Officers had a

meeting with the Board Members of the District Sheep Breeders' Union in the Union's Office in Nalgonda. The gist of the discussions and findings of the Teams on the problems and needs of the sheep/goat farming communities are summarised below:

General Information: Small ruminant farming is a major livelihood source for over a million farming households in Andhra Pradesh. Their numbers and distribution vary widely in the different districts, with heavy concentration in some districts like Nalgonda and Mehbubnagar.



Consultation with the Sheep Breeder's Association, Nalgonda





Even though the Village Sheep Breeders' Associations, their District Unions and the State Federation exist, these institutions play only marginal roles in the welfare and development of the shepherd communities and their flocks.

The Village Associations, District Unions and the State Federation are all incorporated under the Andhra Pradesh Cooperative Societies Act, with Officers of the Department of Animal Husbandary as Managing Directors under their bye-laws. The Nalgonda District Sheep Breeders Union has 315 Villages Associations affiliated to it. The District Unions are affiliated to the State Sheep Breeders' Cooperative Federation, where an Additional Director, AH is the MD.

The Federation has a corpus of over Rs. 30 Lakh in their Bank Account, all of it deposited by the District Unions. The Federation has not initiated any activity nor is it allowed to appropriate the funds it has in the bank as the MD and the Department of Animal Husbandary are in no mood to let the Federation function. Though Cooperatives in legal terms, these institutions virtually have no autonomy and are merely appendages of the Department of Animal Husbandry, inactive in most cases.

Land Holding: Shepherds are invariably marginal farmers and own up to two acres of land, 1-2 acres is the most common holding size. The land the shepherds' own is used for cultivating paddy crop in years with normal rainfall (for home consumption) and alternatively with dry land crops like castor. Very few among them are landless.

Flock Holding: Flock holding size varies from 10-70 sheep and always a few goats, usually around 10 percent of the sheep numbers. The most common holding size is however 40-50 sheep and some 5 goats. Goats produce twins, freshen twice a year and therefore can add 2-4 kids every year to the flock, while sheep do not twin and produce just one lamb per year. However sheep is the preferred animal as far as the shepherds are concerned, because

grazing for them is available almost round the year, although never in adequate measure. During summers, goats need bought-out fodder as tree loppings are not available in summer. State Policy too is in good measure responsible for the pro-sheep bias and inhibits considerably the normal and natural growth of the goat population.

Daily routine of the shepherds: Shepherds start their day with a thorough inspection of the flock in the morning to check for foot/hoof injuries, thorns and other illnesses. Often thorns from *Prosopis Juliflora* (Dwarf Babul) are a menace, causing sores and injuries to the skin of sheep and goat. They then let the ewes' nurse the suckling lambs and water all animals in the flock. The shepherds then move out in search of grazing along with their flock. If the grazing is nearby, their wives can bring them lunch and they return home for the night halt. Animals are watered thrice a day – once in the morning at home and then at mid-day and in the evening. Access to drinking water for animals is however one of the major constraints that shepherds face in their day-to-day flock management.

Grazing: Grazing is always scarce, confined to common property resources (common grazing land in villages, where available), current fallows and way-side green herbage. Shepherds have no grazing rights in forests and in fact are prohibited from using forests as a source of fodder. Shepherds often lease for the seasonal fallows from private owners in their own and neighbouring villages for Rs. 500 per 6 acre lots per season as reserve grazing areas. In summers (towards the end of March), the shepherds start their migration to Nagarjuna Sagar area and return in July (when the rainy season starts) for cultivating their own land.

Often shepherds have to face grazing restrictions imposed by farmers in their villages. Bickering and quarrels with village community on account of grazing is almost a daily routine. Post harvest, farmers normally allow shepherds to





graze the fallows and to bed down on the land for getting the benefit of urine and manure and even pay the shepherds a small fee per night of stay.

Household Incomes: Selling of sheep and goat is the main source of income. Traders come to villages all through the year, but major season for sale is June-July every year. Terms of trade are fair for village sale and shepherds seldom sell stock in mandis/hats. Male lambs and kids around 4 months of age with an average body weight of 10 kgs are the most common age for sale and fetch Rs.1,000 per lamb/kid. The shepherds claim difficulties in migration with kids and lambs as the reason for the early sale of stock, though this is not sufficient justification for such utterly uneconomic practices.

Females among the breeding stock are sold only at the culling age of six years and fetch Rs. 600 per animal. Average income for a typical shepherd household owning 40-50 sheep and 5-6 goats, from their flocks is about Rs.9,000 a year. In addition they earn from their land Rs. 3,000-5,000 over and above food grains for home consumption, in years with normal rainfall.

The preferred age for slaughter of sheep in Andhra Pradesh is 12-14 months, when shepherds can get some Rs. 2,000-2,500 per head of animal depending upon growth and body weight of individual animals. The inability of the shepherds to hold on to lambs till they are prime meat animals undermines their viability in the long term.

Allowed to develop normally, sheep flock size will double in three years, if there is no stock removal for slaughter at 40 percent of flock size, every year (60 percent in the case of goats). In Nalgonda a shepherd with 40-50 sheep is hardly able to sell 9 or 10 male lambs annually and holds on to all ewes in the flock, adults as well as new borns, as reported by them, in order to maintain flock size. This clearly indicates a large scale, recurring lamb/kid mortality, condemning the shepherds to subsistence.

Another reason for the stagnant flock size in Nalgonda is the inability/unwillingness of shepherds to carry an adequate number of Rams in the flock for breeding. The ideal ratio is 1 Ram for 10 ewes, but the current proportion in most flocks is 1:35 or even less, some times as low as just one Ram in a flock of 70. This too leads to stagnation of flock size as many ewes are unable to freshen every year and contribute one lamb per year.

Veterinary Services: Shepherds seldom are served routinely by the State Veterinary institutional network in the district. They have to call the Doctors and/or Livestock Inspectors for veterinary services, except for the ritual and inadequate vaccinations during Janmabhoomi visits by the AH departmental Staff. Often these specific calls for service delivery are expensive and cost the shepherds over Rs. 200 per call.

Small ruminants have routine health problems like ecto/endo parasites, foot rot, entero-toxemia and pox; and epidemics like PPR and blue tongue. De-worming and spraying are seldom practiced as a standard management measure by shepherds. Vaccines against PPR is now available at Rs.1.50 per dose (50 percent subsidy from AHD), but seldom in adequate quantities and in time. There are no vaccines for blue tongue and treatment with antibiotics though successful is extremely expensive (up to Rs. 250 for a full course per affected animal).

Shepherds consider access to veterinary services as an essential pre-requisite for success in small ruminant farming. The shepherds themselves are willing to promote a village-based, de-centralised, community managed sustainable service delivery mechanism with the help of their District Union/State Federation and the State Department of Animal Husbandry. Young shepherds from among themselves trained as small ruminant health workers and home delivering minor veterinary services and vaccinations, one in each village cluster. On time vaccinations,





periodic de-worming and spraying for ecto-parasites will cut down avoidable loss of stock, increase the growth rate/weight gain and reduce finishing time for the market.

Discussions with Sheep Breeders' District Union:

During the discussions with the Board Members of the Sheep Breeders' District Union, the Union agreed that shepherds will promote village-based small ruminant health workers and to ensure prompt and inexpensive but effective veterinary health care (preventive as well as curative) to sheep and goat flocks.

1. The Union agreed to discourage the practice of approaching the medical shops for medicines, by shepherds. They realised that the medical shops often deceive them by giving sub-standard/spurious/wrong medications and that the practise has, in many cases, resulted in considerable economic losses to shepherds.
2. The Union Board Members wanted the Government to help sheep/goat breeders through subsidised vaccine supply for major sheep/goat epidemics.

They however decided to make their own arrangements for a timely supply of vaccines, in case of emergencies.

3. The Union agreed to propose a thorough reorganisation of the sheep breeders' cooperative movement through a revision of the byelaws at all levels, enhancing the scope of the movement to provide essential support and services to members and making them autonomous, farmer managed institutions.
4. The Union agreed to work with the Department of Animal Husbandry and NGOs to launch a Village Based Training Programme for Skill Transfers to shepherds and for Technology Adoption, for improving flock management, increasing output and for higher income from their small ruminant enterprises.
5. The Union agreed to seek the help of the Department of Animal Husbandry and the AP Agricultural University to mobilise a massive capacity building programme among the breeders to help the sheep/goat breeders select Rams/Bucks for sustainable genetic improvement and higher productivity amongst their flocks.



Annex 1**DEMOGRAPHIC INFORMATION OF THE VILLAGES VISITED BY THE WORKSHOP PARTICIPANTS**

Item	Hajilapur	Nandipet	Kodga	Solipur	Konded
Households	293	320	1255	650	300
Human Population					
Male	648	529	2628	1619	523
Female	681	536	2575	1511	536
Total	1329	1065	5203	3110	1059
SC	181	239	950	474	164
ST	-	-	-	370	198
Total	181	239	950	844	362
Migration of families since 1990					
Arrivals	-	6	-	15	-
Departures	25	-	-	-	-
No. of Hamlets	1	-	7	1	1

Annex 2

LIVESTOCK POPULATION AND DISTRIBUTION OF HOUSEHOLDS IN THE VILLAGES VISITED BY WORKSHOP PARTICIPANTS

S.No	Species	Population	No. of households holding Livestock	Proportion Owned by			
				Landless	Small and marginal farmers	Medium and Large farmers	SC, ST households
Village: Hajilapur							
1	Bullocks	84	40	-	55	45	5
2.	Cows (Local)	163	50	-	55	45	1
3.	Cows (Crossbred)	2	1	-	-	-	-
4.	Calves	42	40	-	55	45	5
5.	Buffaloes	230	65	10	50	40	5
6.	Buffalo calves	52	10	5	55	40	5
7.	Sheep	3500	28	-	100	-	-
8.	Goats	192	10	-	100	-	-
9.	Poultry	1148	90	15	40	45	15
10.	Pigs	34	1	100	-	-	-
11.	Others (Dogs)	28	28	95	-	5	25
TOTAL		5475	363	210	400	5	25
Village: Nadipet							
1.	Bullocks	86	26	0	43	57	3
2.	Cows (Local)	110	34	0	64	36	0
3.	Cows (Crossbred)	0	0	0	0	0	0
4.	Calves	57	17	0	32	68	0
5.	Buffaloes	82	25	0	44	66	0
6.	Buffalo calves	86	26	0	54	46	0
7.	Sheep	3183	99	0	15	85	0
8.	Goats	460	14	0	60	40	4
9.	Poultry	1450	45	42	38	20	21
10.	Pigs	0	0	0	0	0	0
11.	Others (Dogs)	168	15	0	15	85	2
TOTAL		5682	301	42	365	503	30
Village: Kodgal							
1.	Bullocks	514	84	34	54	12	10



Annex 2 (contd.)

S.No	Species	Population	No. of households holding Livestock	Proportion Owned by			
				Landless	Small and marginal farmers	Medium and Large farmers	SC, ST households
2.	Cows (Local)	344	31	0	14	86	-
3.	Cows-(CB)	30	7	0	7	93	0
4.	Calves	204	56	0	34	66	0
5.	Buffaloes	400	134	0	56	44	12
6.	Buffalo calves	224	187	14	14	72	12
7.	Sheep	4000	58	0	24	76	0
8.	Goats	978	34	0	23	77	0
9.	Poultry	1933	1201	0	54	46	14
10.	Pigs	11	5	0	0	0	0
11.	Others (Dogs)	0	0	0	12	88	10
TOTAL		8638	1797	48	292	660	48
Village: Solipur							
1.	Bullocks	170	42	18	62	20	
2.	Cows (Local)	123	37	6	46	48	
3.	Cows-(CB)	12	4	1	65	34	
4.	Calves	51	38	12	60	28	
5.	Buffaloes	171	54	21	72	17	
6.	Buffalo calves	50	43	19	69	12	
7.	Sheep	5548	28	22	44	34	
8.	Goats	405	24	20	36	44	
9.	Poultry	7086	580	15	48	38	
TOTAL		13616	850	134	502	275	30
Village: Konded							
1.	Bullocks	108	45	24	45	31	5
2.	Cows (Local)	31	25	18	64	18	0
3.	Cows-(CB)	10	8	0	47	43	0
4.	Calves	38	12	10	47	43	0
5.	Buffaloes	119	42	24	56	20	0
6.	Buffalo calves	67	25	0	34	66	0
7.	Sheep	814	21	0	66	34	4
8.	Goats	62	5	0	45	55	0
9.	Poultry	1290	294	48	35	17	0
TOTAL		2539	477	124	439	327	9



Annex 3

MARKETING INFRASTRUCTURE IN THE VILLAGES VISITED BY WORKSHOP PARTICIPANTS

Item	Hajilapur	Nandipet	Kodgal	Solipur	Konded
Milk Co-operative Society	No	Yes	No	Yes	Yes
No. of members	-	70	-	40	60
Milk collection (Lit./day)	-	220	-	150	150-200
Price paid (Rs./Lit.)	-	8-11/-	-	7-10/-	8-10/-
Milk sold to private vendors (Lit./day)	65	110	600	80	100
Price paid (Rs./Lit.)	10/-	8-12/-	10/-	10-12/-	12/-
Sheep Breeders Co-op. Society	Yes	Yes	Yes	Yes	Yes
No. of members	45	42	52	45	65
No. of sheep sold/year	70	200	800-1600	300	350
Amount paid/sheep (Rs.)	1500/-	500-800/-	1000/-	500-700/-	500-800/-
Marketing channel for sheep	Butchers	Butchers	Butchers	Butchers	Butchers
Kind of poultry	Desi	Desi	Desi	Desi	Desi
Usual holding size	2-8	5-10	3-15	3-5	5-10
Egg production/bird/yr.	40	40	30	40-50	60
Eggs marketed	-	-	-	--	-
Eggs used for hatching	20	20	25	25	40
Birds sold/yr.	350	600	400	350	200
Rate per bird (Rs.)	100/-	80-100/-	50/-	80/-	90-100/-

Annex 4

DEMOGRAPHIC INFORMATION OF SIX VILLAGES

Item	L.B. Puram	Vanadurgapuram	Vepulabailu	Budithireddipally	Jarawaripally	Chindepally
Households	178	253	101	121	135	80
Human population						
Male	286	510	228	270	273	155
Female	154	489	220	282	280	111
Total	440	999	448	552	553	266
SC	493	154	45	137	21	469
ST	-	19	-	-	-	-
Total	493	173	45	137	21	469
Migration of families since 1990						
Arrivals	-	0	-	-	-	-
Departures	0	0	-	8	-	5
No.of hamlets	9	6	-	2	-	3

Annex 5

LIVESTOCK POPULATION AND DISTRIBUTION

S.No	Species	Population	No. of households holding livestock	Proportion owned by			
				Landless	Small, marginal farmers	Medium and Large farmers	SC, ST households
Village: LB Puram							
1.	Bullocks	16	4.49	-	100	-	-
2.	Cows (Local)	2	1.12	-	100	-	-
3	Cows-(CB)	127	47.5	3.14	72.46	3.14	21.26
4.	Calves	117	45.5	2.36	79.48	3.14	15.02
5.	Buffaloes	1	0.56	-	100	-	-
6.	Buffalo calves	2	0.56	-	100	-	-
7.	Sheep	20	2.24	-	100	-	-
8.	Goats	55	2.24	-	100	-	-
9.	Poultry	12662	34.83	-	99.51	0.04	0.45
Total	13002	139.04					
Village: Vanadurgapuram							
1.	Bullocks	20	4	65	20	-	15
2.	Cows (Local)	59	11	35	28	15	22
3	Cows-(CB)	246	65	16	24	48	12
4.	Calves	44	43	19	25	41	15
5.	Buffaloes	6	3	45	40	15	-
6.	Buffalo calves	4	2	42	44	14	-
7.	Sheep	51	0.2	-	10	-	-
8.	Goats	269	4	25	30	-	45
9.	Poultry	632	43	41	28	8	23
Total	1331	175.25					
Village: Vepulabailu							
1.	Bullocks	23	15	8.6	56.5	34.7	-
2.	Cows (Local)	10	6.6	-	30	20	50
3	Cows-(CB)	96	63	5.2	72.9	11.44	10.4
4.	Calves	111	73	2.7	74.7	14.4	8.1
5.	Buffaloes	2	1.3	-	100	-	-
6.	Buffalo calves	2	1.3	-	100	-	-
7.	Sheep	401	2.64	18.7	72.8	-	8.47
8.	Goats	314	2.07	5.7	49	-	45.22
9.	Poultry	405	26.7	2.46	48.64	14.56	34.32



Annex 5 (contd.)

S.No	Species	Population	No. of households holding livestock	Proportion owned by			
				Landless	Small, marginal farmers	Medium and Large farmers	SC, ST households
Total	1364	191.61					
Village: Budithireddipally							
1.	Bullocks	4	2.73	-	100	-	-
2.	Cows (Local)	1	0.68	-	100	-	-
3.	Cows-(CB)	107	73.28	6.54	83.17	3.73	6.56
4.	Calves	67	45.89	4.47	73.13	13.43	8.97
5.	Buffaloes	-	-	-	-	-	-
7.	Sheep	2	1.36	-	100	-	-
8.	Goats	8	5.47	50	50	-	-
9.	Poultry	56	38.35	-	100	-	-
Total	245	167.76					
Village: Jarawaripally							
1.	Bullocks	40	20	-	20	10	2
2.	Cows (Local)	12	6	-	12	-	-
3.	Cows-(CB)	176	129	20	80	64	12
4.	Calves	46	40	10	15	15	6
5.	Buffaloes	2	1	-	2	-	-
6.	Buffalo calves	2	1	-	1	-	-
7.	Sheep	71	2	21	50	-	-
8.	Goats	2	1	2	-	-	-
9.	Poultry	188	125	75	60	38	15
Total	539	305					
Village: Chinderpally							
1.	Bullocks	62	53	-	32	-	19
2.	Cows (Local)	20	27	-	41	-	27.5
3.	Cows-(CB)	5	9	-	7	-	3.5
4.	Calves	30	24	-	48	-	31
5.	Buffaloes	99	42	-	46	-	10.3
6.	Buffalo calves	82	4	-	46	-	10.5
7.	Sheep	122	6	-	3.4	-	3.5
8.	Goats	38	4	-	-	-	5.17
9.	Poultry	392	62	-	34	-	29.3
Total		850	231				



Annex 6

MARKETING INFRASTRUCTURE AND COOPERATIVES OF SIX VILLAGES

Item	L.B. Puram	Vepulabailu	Budithireddypally	Jarawaripally	Chindepally
Milk Co-operative Society	No	No	No	No	No
Number of members	-	-	-	-	-
Milk Collection (Lit./day)	-	-	-	-	-
Price paid (Rs./Lit.)	-	-	-	-	-
Milk sold to private vendors (Lit./day)	280	240	200	250	200
Price paid (Rs./Lit.)	7=50	7=00	7=50	7=50	7=50
Sheep Breeders Co-op. Society	No	No	No	No	No
Number of members	-	-	-	-	-
Number of sheep sold/year	20	20	25	20	25
Amount paid/sheep (Rs.)	2500/-	2000/-	2000/-	2000/-	2000/-
Marketing channel for sheep	Butchers	Butchers	Butchers	Butchers	Butchers
Kind of poultry	Broilers	Desi	Desi	Desi	Desi
Usual holding size	-	5-10	5-10	1-5	3-5
Egg production/bird/yr.	-	60	65	60	35
Eggs marketed	-	-	-	-	-
Eggs used for hatching	-	-	-	-	-
Birds sold/yr.	-	100	120	100	120
Price (Rs. Per bird)	-	60/-	60/-	60/-	65/-



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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.



Intercooperation in India (IC)
 Hyderabad - 500 034
 Tel: + (91) 40 2335 5891/2
 Web site: www.intercooperation.org.in

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.



South Asia Pro-Poor Livestock Policy Programme (SAPPLPP)
 New Delhi - 110 029,
 Tel: 91 11 26197851/2619 7649
 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 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.



Capitalisation of Livestock Programme Experiences India
 New Delhi - 110 016,
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 E mail: calpi@intercooperation.org.in

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.

