

An Economic Impact of Livestock in watershed development program in Medak and Mahabubnagar districts of Telangana state.

Dr. V Pavankalyan¹, Y. RG Reddy² and Sai Kumar³

1. Assistant Professor, Guru Nanak university, University Institute of Agriculture & Horticulture(UIAH), Dept. of Agricultural Economics, Ibrahimpatnam, Rangareddy.
2. Assistant Professor, Green Field Institute of Agriculture& Research Training, Dept. of Physiology, Mangalpally, Rangareddy District, Telangana.
3. Assistant Professor, Green Field Institute of Agriculture& Research Training, Dept. of Extension, Mangalpally, Rangareddy District, Telangana.

Abstract

Land degradation due to soil erosion by wind and water, low rainwater use efficiency, high population pressure, acute fodder shortage, poor livestock productivity, underinvestment in water use efficiency, lack of assured and remunerative marketing opportunities and poor infrastructure are important concerns of enabling policies. The guidelines of the watershed development stated that an insight into the rain fed regions reveals a grim picture of poverty, water scarcity, rapid depletion of ground water table and fragile ecosystems.

Keywords: Poverty, water scarcity, livestock productivity, ground water table

Introduction

The research analysis on the importance of livestock in the watershed villages highlighted the various activities carried out in the livestock sector, which contributed to an increase in the animal population and provided income for poor, marginal and landless families in watershed villages. The challenge in rain-fed areas, therefore, is to improve rural livelihoods through participatory watershed development with focus on integrated farming systems for enhancing income, productivity and livelihood security in a sustainable manner. Accordingly, the watershed programme has been given utmost important to improve the livestock in selected watershed projects of Medak and Mahabubnagar districts in Telangana state.

Objective of the Research Study

Impact of different livestock activities carried out under the selected watershed areas and their effect on the socio-economic status of the watershed population.

The various strategies and interventions developed in the production of livestock in selected watersheds areas.

Materials and Methods

1. Primary data collected from the DWMA, Medak and Mahabubnagar districts of watershed projects on different PSI activities and expenditure.
2. Primary data collected from the beneficiaries of the watershed villages through household survey.
3. Household schedule-to collects the socio-economic, demographic and other aspects of the sample households.
4. To collect information on the present status of infrastructure from project officer and other facilities available in the area.

The entire methodology adopted for sampling is schematically followed. A multistage sampling procedure

was adopted for impact assessment of projects covering all the watersheds in the district in the first stage of sampling. In each project all the micro- watersheds are considered so as to have a good representative nature of the works undertaken both in physical and social aspects.

After this all the villages located in each micro-watershed are considered for drawing household sample for collecting socio-economic data. GDs (Group Discussions) were organized in each village wherever the villages are less than nine.

In cases where the villages are more than nine the villages are grouped and GD was organized for a cluster of 5 to 6 villages. Five percent of households are selected for survey, subject to a minimum of 75 households per project area. The data collected from households is compared against the baseline data collected for drawing inferences.

Data Analysis and Tabulation:

The livestock related data for selected watershed projects of Medak and Mahabubnagar districts were tabulated and analyzed.

Analysis of data pertaining to animal population and milk production in terms of before-and after-implementation of watershed projects.

Group Discussions (GDs) were conducted and analyzed about the impact of the watershed project on livestock development programme.

Study Area:

The livestock research study was conducted in selected watershed projects in the districts of Medak and Mahabubnagar districts. A total of 2 districts covered 8 projects. The livestock activities expenditure captured and analyzed for the projects of 2 districts and also analyzed cattle population and milk production before and after implementation of watershed projects. The table-1 explains about the study area details of batch-IV (2013-14) projects of 2 districts.

Table 1: Study Area for the Livestock Research

Name of District	Medak	Mahabubnagar
No. of Projects	5	3
No of MWS	45	25
Sanctioned Area (Ha.)	19,219	12,295

In Medak, the total number of projects comprised as 5 in 10 mandals and in these, 45 MWS villages are included in the project. The total project sanctioned extent area of the project 19,219 ha. In mahabubnagar, the total number of projects comprised as 3 in 3 mandals and in these, 25 MWS villages are included in the project. The total project area sanctioned area of the project 12,295 ha.

Data Analysis and Tabulation:

The livestock activities for Batch-IV(2013-14) : 8 projects and 70 MWS villages were analyzed. The 2 districts livestock activities expenditure tabulated and analyzed in connection with the targets and achievement of budget released from the watershed programme as wells as NREGS under the livestock development. Analysis of data pertaining to animal population and milk production in terms of before and after implementation of watershed projects.

Group Discussions (GDs) were conducted and analyzed about the impact of the watershed project on livestock development.

The new approach systematically integrated livestock management as a central intervention and encouraged dairying. In the rainfed areas, the animal resources became a major source of income for the people and effectively integrated with the watershed development projects, a comprehensive animal husbandry component has been contributed significantly ensured a better and sustainable livelihood for the people of the rainfed areas.

The watershed programme focused on productivity enhancement and livelihoods priority along with conservation measures. Resource development and usage planned and promoted farming and allied activities and also promoted local livelihoods while ensuring resource conservation and regeneration. Accordingly, watershed programme promoted activities such as raising fodder, pasture development, sericulture, bee keeping, back yard poultry, small ruminant, other livestock and other micro- enterprises, Veterinary services for livestock and other livestock improvement measures.

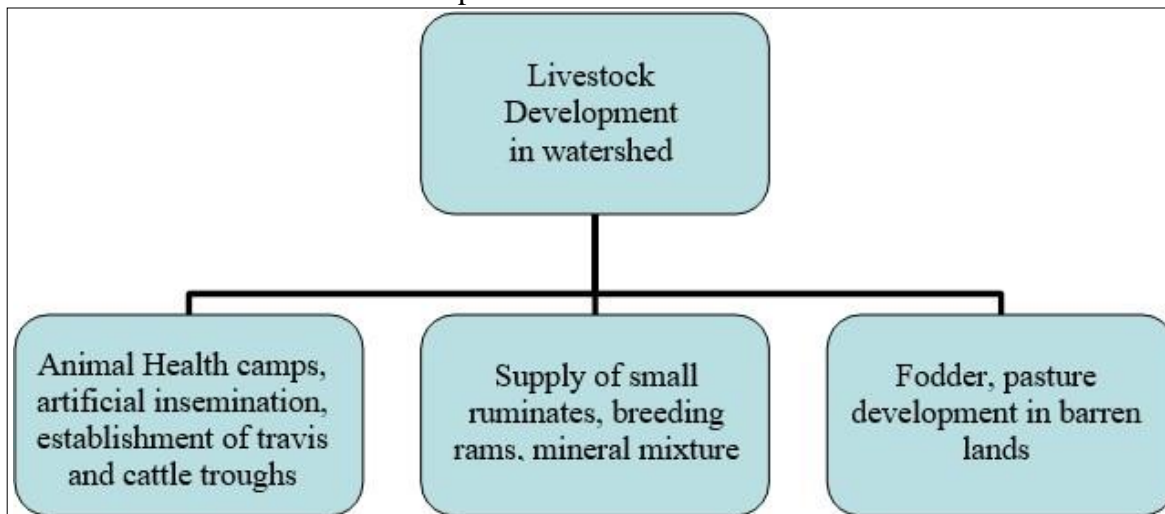


Fig 1: Livestock Management in Watershed development programme

Convergence with NREGS –Livestock Development

The PMKSY-Watershed programme convergence with various line departments in the rural development sector which NREGS played a key role on promoting employment guarantee to the rural community and implemented various works related to watershed programme such as NRM based projects for implementation by PMKSY-Watershed project & MG-NREGS in PMKSY villages, sharing of funds & staff between both the programmes based on the type of projects executed ground water recharge, drainage line treatment, afforestation, common property resources projects and others- flood control, roads land development & fodder development, dry land horticulture.

Primary and secondary data analysis:

The primary data has been collected from the beneficiaries of watershed project area and secondary data collected from the watershed office. The data analyzed and tabulated before and after the watershed project implementation on availability of the fodder in quintals in Table-2. The details of dairy cattle from pre to post IWMP-Watershed Project in Medak and Mahabubnagar districts are furnished in Table-2 and.

Table 2: Milch Cattle Population in Batch-IV Projects of Medak and Mahabubnagar districts

Name of the District	No. of Projects	Before the project (cows)	After the project (cows)	% of Change	Before the project (Buffaloes)	After the project (Buffaloes)	% of Change
Medak	5	595	872	57	235	396	42
Mahabubnagar	3	691	903	43	157	378	58
Total	8	1286	1775	100	392	774	100

In this, it showed the number of milch cattle from before-project status to after project with the end result. In 2 districts the population of cows and buffaloes has been increased at end of the project, cows increased 57% in Medak and 42% in Mahabubnagar and similarly buffaloes increased 43% in Medak and 58% increased in Mahabubnagar district.

The cattle population has been increased due to the intervention of watershed activities to enhance the livestock development activities such as animal health camps, supply of breeding rams, fertility camps, small ruminant health camps, feed supply to pregnant milch animals during last 100 days of pregnancy, feed supply to AI born true to type calves, supply of breeding bucks, establishment of travices and also cattle troughs, cultivation of green fodder. As a result of these activities milk production has been increased gradually. The table-5 indicates regarding the status of milk production pre and post project of watershed in batch-IV projects of 2 districts.

Table 3: Milk Production (Kilo litr/Yr) in Batch-IV Projects of Medak and Mahabubnagar districts

S. No	Name of District	Before project	After project	Results
1	Medak	1,255.1	2,540.4	The milk production is increased by 33.8%
2	Mahabubnagar	1,504.4	2,886.3	The milk production is increased by 31.4%

The table-3 explain the details of milk production from the four districts of Medak and Mahabubnagar region from Batch IV. In this, it showed the number of milk production (Thousand liters per annum) from before-project to after project period. Among these, Medak had an increase in milk production as 33.8% from 1,255.1 (kilolitre/year) in before-project to 2,540.4 (kilolitre/year) after project and 31.4% in mahabubnagar district.

Results and Discussion:

The livestock sector plays a significant role in India's socio- economic growth. Not only does it provide nutritious healthy food for millions of people, it also creates substantial employment in both the rural and urban sectors. The overall increase in income and consumption rates reflects the ability of watershed growth to enhance additional properties, such as livestock, in watershed projects villages in the Telangana districts. Improvements in fodder and common land have tremendous potential for employment for the rural population within their own villages. The sector also has the ability to create self-employment. Employment is one of the main indicators for watershed growth and its effect on alleviation of rural poverty. Total employment has risen among the beneficiary households. The trend of employment changes towards horticultural crops and other commercial crops, along with non-farm activities that have increased significantly.

The composition of the animals has undergone a change; firstly, the local variety of cows, buffaloes have been replaced by cross-breed cows, buffaloes; and secondly, the number of milch animals has increased, and small ruminants, such as sheep and goats, have also increased since the introduction of the watershed. In general, the effect of watershed programs on animal husbandry indicates that livestock holding potential in watershed areas has improved due to watershed development programs, although some improvements have been made.

The number of farmers engaged in dairy farming has increased accordingly milk production has also increased. As far as feeding practices are concerned, the major change recorded is that usage of mineral mixture along with green fodder has increased. The watershed programme provided mineral mixture to the livestock which helped animal's nutrition and resulted more milk production. The dairy operation is gaining importance in the watershed areas due to the availability of feed and other related facilities, such as the availability of artificial insemination services, etc. It is also noted that the number of farmers engaged in dairy farming has increased thus milk production.

As concerned with the livestock watershed also established travices, water trough facilities etc., all these directly or indirectly helped the animal development in the watershed villages. There is a close linkage between the various aspects and livestock sector especially green fodder availability, feed availability, animal health etc. The livestock sector makes a significant contribution to the income in watershed villages with well developed dairy sector.

The success of the dairy sector depends on several aspects The Impact of the watershed village indicates that due to implementation of watershed program the availability of feeds and fodder increases and, in this case, particularly green fodder that stimulated the growth of dairy sector. At the same time the different interventions in the livestock management in the watershed villages clearly indicated the watershed program is beneficial to landless poor, small and marginal farmers in the selected watershed villages.

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