

Enhancing the food, health and nutritional security through improving livestock and agriculture farming system in Nepal

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INTRODUCTION

Three and half million people are considered moderately to severe food insecure (WFP, 2009) in Nepal. The Global Hunger Index (GHI) 2011 Report prepared by the International Food Policy Research Institute (IFPRI) has placed Nepal in the 54th position. The data shows 16 percent of the population to be undernourished, 38.8 percent of under-five children to be underweight and 4.8 percent of them dying before they reach five years of age (IFPRI, 2011). Two out of every three Nepalese suffers from food insecurity each year (Feed the Future, 2013). Of total farmers, 53% are small holders and mostly rural people depends on external food sources including the World Food Program where food production is enough to meet more than six months demand.

Agriculture and livestock is important sector of rural economy and valuable source of food and protein including milk and meat but its productivity is low in Nepal. About 65 % of people are engaging in agriculture and livestock sector but three and half million people are considered moderately to severe food insecure in Nepal. Unavailability and inadequate food intake is considered to be major factors that responsible for hunger and malnutrition at the same time unhygienic livestock farming further increased the chance of zoonotic infection among children and other household members. Therefore, it is important to develop of agriculture and livestock sector to combat the food, nutrition and overall health problem of country. At the end of study, agriculture and livestock production particularly in crop and milk will be increased through improved management techniques that will enhance the food, nutritional and at the same time we can assess the sources of common enteric pathogen that share both human and livestock and its risk factor that ultimately improves health status of particular household member.

OBJECTIVES

To enhancing the food, health and nutritional security through improving livestock and agriculture farming system in selected vulnerable community of Nepal.

To examined the common enteric pathogens that responsible to human infection through livestock sources and its risk factors.

To introduce the some drought resistant crop variety and artificial insemination program in rural, smallholder livestock farmers enhancing the milk production to cope the food insecure condition.

To enhancing capacity building to farmer.

MATERIALS AND METHODS

The proposed study will be conducted in selected households from food insecurity region of Nepal and innovative intervention will be applied to achieve the objectives of study.

Activities

Epidemiological assessment-identify vulnerable livestock farmer/household

After selecting household, improved varieties of crop and seed that is suitable to particular climate will be recommended. Probiotics will be incorporated in livestock feed to combat harmful enteric pathogen.

Intervention such as artificial breeding program and distribution improved forage varieties will be launched to improve animal productivity at local level.

Clinical samples to from both livestock and children from particular household will be collected and will be examined for common enteric pathogens(zoonotic) in livestock and children.

Women are equally involved in both agriculture and livestock act as primary manager in household, therefore program will focus to support women in their livestock and agriculture particular in marketing activities by providing local market information, processing, packaging and harvesting technique and water purification.

Collaborates approaches-DLSO, DADO, NGO, INGO and stakeholders

Proposed research will be expected to be carried out from 2013-2014

Data will be analyzed through suitable statistical tests.

Training, awareness, and dissemination at the end of research.

EXPECTED OUTPUT

Research will address the food and nutrition issues of selected vulnerable community households of Nepal.

Enteric pathogen or microbes and its sources as well as risk factors will be identified both in children and livestock that share the common households.

Through artificial insemination it is expected to increase the milk production in local livestock by breeds improvement and distributions of improved varieties of crop among farmers that will meet the some nutritional support.

Capacity building to rural livestock farmer, particularly for women and special awareness program to such as water sanitation and improved management of livestock farming practices will be achieved.

CONCLUSIONS

Agriculture (including crop and livestock) is the main source of the rural economy. Thus proposed research will address for the improved livestock and agriculture practices such as breed improvement for higher livestock productivity and distribution of improved varieties of crop or seed suitable to particular climate in selected vulnerable community for food and nutritional support. Potential harmful enteric pathogens and its risk factors will be identified in the community. Capacity building and awareness program such as water sanitation will be more focused on women. This study also sensitizes on sustainable livestock and agriculture practices aiming to maintain the food production to feed people of the country.

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