

Protection against PPR Disease



Background & Objectives

Agriculture in Chhattisgarh is dominated by small land holders and landless. The distribution pattern of animals in the state indicates that 42.8% of small ruminants are reared by landless, sub-marginal and marginal farmers. Public investment and interventions made in small ruminant sector are expected to increase productivity and profitability of these poor farming communities, bringing them out of the poverty cycle.

Goats are an important provider of subsidiary income to the farming community and provide a monetary cushion when crops fail due to low rainfall and other natural calamities.

The peste-des-petits ruminants (PPR) is an acute and highly contagious, viral disease which affects goats and sheep. Any outbreak of this disease may rapidly escalate to epidemic proportions spreading to several villages, leading to panic and distress selling of animals. Health of small ruminants and the livelihood of farmers are therefore closely interlinked.

The State Government initiated a campaign against PPR under RKVY in 2010-11 and 2011-12 with an overall outlay of Rs 4.82 crores, with a physical target of vaccinating 90% of total goat population.

Intervention

To prevent PPR among the livestock of Chhattisgarh, the State Government undertook a project aimed to conduct mass vaccination of sheep and goat population in a campaign mode (similar to pulse polio campaign). In order to increase the efficacy of vaccination, prior mass de-worming of the animals was also undertaken on a mass scale.

Wide spread awareness generation and information regarding the campaign was initiated prior to field activities. During the scheduled campaign in a district, entire departmental staff and associated manpower were involved in de-worming and vaccination of sheep and goats. For increased efficiency, division of labour into vaccine and logistic transporters, vaccinators, block/district/state monitors was planned. Budgetary provisions were made for all the sub-activities in the campaign.

The cost of the vaccine was shared by RKVY and ASCAD (Assistance to States for Control of Animal Diseases, a Centrally Sponsored Scheme of Department of Animal Husbandry Dairying and Fisheries) and totalled Rs 52.50 lakhs. All other costs were borne by RKVY solely which included cost of de-worming, honorarium for non-government vaccinators, transportation and syringes etc.

All districts of Chhattisgarh were covered in the project targeting about 90% of goat population.

Field level planning and technical sensitization of the deworming and vaccination teams was the entry point activity of the project. Before the actual beginning of the campaign, district wise action plans, schedules and training and monitoring mechanisms were intricately planned on the lines of Pulse Polio Campaign. For each campaign vaccination teams were identified which consisted of 2-3 members assigned to cover 6 to 12 villages (depending on the



Dr. M P Yadav being honored by presentation of Memento Shawl Shripal by the chief guest Hon'ble Chief Minister of Chhattisgarh Dr. Raman Singh

topography, animal distribution, available transport etc.) in 7-8 days time frame of the campaign.

In 2010-11, a total of 1752 vaccination teams covered 18,738 villages conducting a total of 25.95 lakh vaccinations in June 2010. This was preceded by 24.14 lakh de-worming in the month of May.

Serum samples from about 0.1% goats randomly has been collected previous to vaccination in all districts and another 0.1% samples collected after 21 days of vaccination randomly – constituting the sero-monitoring strategy of the project.



The project had inbuilt mechanisms to check the performance of field level vaccination efficacy. This was done by checking whether the vaccination done at field level was carried out properly by testing the blood serum. In this technique, serum was collected randomly in a sample population before the start of vaccination and 15-21 days after vaccination. A total of 1280 pre-vaccination and 5664

post-vaccination samples were analyzed by a technique called cELISA at Indian Veterinary Research Institute Mukteshwar, Uttarakhand. Results show that the pre-vaccination protection level averaging the figures of different districts increased from 40% to 88%.

The intervention was given highest priority by the State leadership and the Government and extensive media coverage and publicity was provided to generate awareness.

Outcome

Data obtained from Integrated Sample Survey indicates that growth rate of goat meat production in the State was more than in any period in the state's history. In 2007-08 (baseline year for RKVY) total goat meat production was 4.95 thousand MT which increased to 6.10 thousand MT in 2010-11, recording an annual growth rate of 7.74%.

The incidence of PPR disease has been brought down to a bare minimum. From an average of 5-6 major epidemics of the disease before 2007-08, it has reduced to 1 in 2010-11 in the state. Reduction in mortality due to PPR disease is estimated to be between 50-90%.

The implementation of this project saw escalation in the number of vaccinations for PPR disease from 5-6 lakhs per year before project period to 26 lakhs during the project period, which is approximately a five fold increase.

This intervention is expected to largely control PPR disease and pave the way for its complete eradication. It is also expected that the PPR Control project would be extended to neighboring states as well.