

## Farm made live virus vaccine works well against contagious ecthyma

The outbreak of contagious ecthyma in goat is very common in Tripura, particularly during rainy season. There was an outbreak of contagious ecthyma in goats during the month of July 2009 at ICAR goat farm, Tripura centre Lembucherra. Contagious ecthyma is a highly contagious disease that spreads very fast among the animals, irrespective of age. The causative agent is Parapox virus belonging to the family *Poxviridae*. **Symptoms:** The affected goats remained dull, depressed with anorexia and high rise of temperature varying from 106-108°F. There was profuse salivation, lachrymation accompanied with mucopurulent nasal discharge, congestion of buccal mucosa with nodular eruption on the oral commissure, lips, mouth, nostrils, tongue and gum. The lesions were progressed in some animals through papules, vesicles, pustule stage, forming thus easily detachable scab on the 5<sup>th</sup> day onward after infection. The scabs formed on the affected animals fall off and the virus remained in the environment and the flock got the infection within a short period through contacts (animal to animal, animal-human-animal, utensils etc). Though the mortality rate was nil, the morbidity was very high. After cure, the affected animals suffered from slow growth, late puberty onset, irregularity in estrous cycle and repeat breeding. The disease is thus important on economical point of view. **Treatment:** There is no specific treatment. The scabs were removed mechanically and washed with 5% copper sulphate solution. A paste containing 7% iodine, 2% glycerol and 3% phenol in vaseline was prepared and applied. Surprisingly, the paste worked efficiently and the wound healed up quickly. Since the morbidity of contagious ecthyma was about 80% with no mortality, the affected goats were treated with one antibiotic to combat the secondary bacterial infection along with an antipyretic treatment to reduce fever. The treated animals were recovered within ten days. **Control:** Live virus vaccine was prepared and used to protect the healthy goats. The scab materials were collected from the affected animals. The scabs were dried over 98% sulphuric acid. The dried scabs were crushed to make a powder form. The suspension of the scabs in glycerol (10%) was made and stored in refrigerator. It was used as a vaccine. The vaccine was applied by scrub method at the medial side of the thigh in healthy goats. The use of the prepared vaccine was found effective to protect about 70% of the vaccinated goats. The remaining 30% vaccinated goats probably had infections and thus these goats showed symptoms of contagious ecthyma even after vaccination. The work is in progress to test the performance of the vaccine in large population.



**Plate 5. Washing of mouth lesions with 5% copper sulphate solution followed by application of a paste containing 7% iodine, 2% glycerol and 3% phenol in vaseline**



**Plate 6. Application of farm made live virus vaccine by scrub method at the medial side of the thigh of a goat**