The Asian Journal of Animal Science (December, 2010), Vol. 5 Issue 2 : 223-224 | *RESEARCH ARTICLE*

Administration of different doses of vitamin E and selenium to control mastitis in cow

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ABSTRACT

The study deals with the role of vitamin E and selenium at different doses against mastitis in cow of Kanpur region. After screening 70 milch cows, 12 affected with the mastitis were selected and divided into 3 groups T_1, T_2 and T_3 (four in each) for administration of the different doses @ 5 ml E-care se and @ 10 ml E-care se. In T_1 group any medicine or treatment was not applied. The E-care se @ 5 ml was applied in group t_2 and E-care se @ 10 ml was administrated in cow T_3 by intramusculary injections on interval of 7 days. The result of drugs was calculated on 28 day post treatment through biochemical profiles of milk. Administration of E-care se @ 10 ml lowered pH, chloride content and increased the various milk components of the mastitic milk in comparison of small dose @ 5 ml E-care se. thus, the study indicated that E-care se @ 10 ml was better effective dose for the treatment of mastitis in subclinical cows.

Key words : E-care se, Mastitis, Vitamin E, Selenium

The national economy of some Scandinavian countries and landless labourers in poor countries depends upon heathy livestock and milk production, but some of the diseases like mastitis has decreased the production. Mastitis is one of the most common and serious diseases of dairy animals. It has always been economically devastating disease hampering desired progress in Indian dairy industry. The very essence of dairying is the efficient production of wholesome raw milk that provides consumers with dairy products of high quality. But it is well known that in mastitis there is the inflammation of mammary glands. The inflammation may be response of any kind of mammary tissue injury and usually causes a depression in yield and alters significantly the biochemical composition of milk which in turn influences greatly the processing and keeping quality of milk and milk products (Singh *et al.,* 2006). Mastitis affects the productivity of milk up to 30% and production up to 15%. Te overall national economic loss in India due to mastitis was the tune of rs. 16072 million in which subclinical Rs. 6038.7 million and Rs. 4831 million in cattle and buffalo, respectively (Singh and Singh, 1994). Cost mainly arises from decreased milk production and quality, the therapeutic intervention, loss of antibiotics, contaminated milk and extra labour. No doubt, several drugs to control this disease are available but they are much costly and beyond the reach of poor farmers as well as they have numerous side effects. Therefore, the present study was carried out to control the mastitis with vitamin E and selenium drugs to reduce the cost of the treatment and to protect the side effects of allopathic and antibiotic drugs.

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MATERIALS AND METHODS

The present study was carried out on 70 milch cows being maintained at dairy farm of C.S. Azad university of Agriculture and technology, Kanpur lying at the longitude and latitude range of 79.30^{0}C to 48.35^{0}C east 25.8^{0}C to 28.5^{0}C North, respectively. After screening out of 70 cows, 12 affected with mastitis were selected and divided into three groups, each having four in number on the basis of clinical examination of the udder and certain field tests to detect the mastitis for treatments. T_1 group of animals was not treated with any medicine while t_2 and t_3 group of animals received the E-care se @ 5 ml and @ 10 ml intramuscular injection once a day for 7 days intervals, respectively.

Collection and analysis of milk:

The individual quarters were examined for mastitis by sodium lauryl sulphate as an animal-side-test and 15-20 ml of quarters foremilk samples were collected in sterilized and labeled test tubes taking all the possible aseptic precautions. For estimation of chloride content, 1 ml milk sample was titrated with 0.1341% silver nitrate and 10% potassium chromate indicator which gave red