This study aimed to assess the frequency of clinical and subclinical MASTITIS and to describe the microorganisms involved in inflammatory process of the mammary gland in dairy buffalo herds in the Northeast of Brazil. 1,896 milk samples were analyzed from 474 buffaloes from four dairy farms located in the States of Alagoas, Bahia, Ceará, and Pernambuco. After a physical examination of the mammary gland, milk secretion from each tit was submitted to testing using Tamis and CMT (California MASTITIS test). Positive samples of CMT (++ and ++++) and results of the Tamis test were subjected to a microbiological examination. Of the total samples studied, 90/1,896 (4.7%) exhibited clinical MASTITIS. With respect to the CMT, it was noted that 651/1,896 (34.3%) of the samples submitted exhibited subclinical MASTITIS (scores: +, ++ e +++). Staphylococcus spp. were most frequently found, followed by Corynebacterium spp. and Gram-negative bacteria. The results obtained in this study demonstrate a high incidence of clinical and subclinical MASTITIS in herds in northeastern Brazil bubaline, particularly the coagulase negative Staphylococcus (CNS). It is recommended that better practices of milk collection be implemented, including the improvement of hygiene and the training of milkers in order to reduce the frequency of disease in livestock.