1. INTRODUCTION

In India, Veterinary medicine has a long history dating back to thousands of years, before the advent of western pattern of allopathy for treating diseases in both humans and animals (Sagari Ramdas and Nitya Ghote, 2004). The veterinary science in India shall be classified into codified traditions and folklore medicine and has a documented history of nearly 5000 years. The codified knowledge exists in the form of documentation on various dimensions of veterinary health care of the livestock. There is affluent and efficient ethno veterinary traditions subsist in the villages of India which form integral part of the family and plays an important social, religious and economic role. They comprise of belief, knowledge, practices and skills pertaining to health care and management of livestock. There are local healers (Pashu vaidyas) who are knowledgeable and experienced in traditional veterinary health care system. They use the locally available medicinal plants and traditional tactics for treatment of animals. The ethno veterinary systems are ecosystem and ethnic-community specific and therefore, the characteristics, superiority, and strength of these systems differ greatly among individuals, societies, and regions. However, they are gradually facing the threat of rapid erosion.

In order to maintain the health amongst the livestock resource, McCorkle, an anthropologist, and Evelyn Mathius Mundy, a veterinarian, have done their treasure in the last 15 years to bring attention to that local knowledge in the tropics which deals with animal disease treatment. This body of knowledge pattern is now commonly referred to as ethno veterinary medicine (Andrews et al. 2004). Recently, research on indigenous practices / indigenous technical knowledge has gained the thrust. Ethno veterinary practices are the part of indigenous practices followed in animal healthcare system. It is functional as the knowledge and
practices of local people with regard to the treatment of minor ailments/health problems/diseases in different species of livestock using varied locally available materials. Traditional medicines are cost effective and are socially compatible and easily available. (Samares Kumar Das and Hema Tripathe, 2009). Many social scientists, veterinary practitioners, livestock owners and field workers in developing countries are becoming interested in medicinal plants and their therapeutic uses in livestock care.

Medicinal plants, since time immemorial, have been used in virtually all cultures as a source of medicine. The widespread use of herbal cure and healthcare preparations, as described in ancient texts such as the Vedas and the Bible, are obtained from commonly used traditional herbs and medicinal plants which has been traced to the occurrence of natural products with medicinal properties. The use of traditional medicine and medicinal plants in most developing countries, as a normative basis for the maintenance of good health, has been widely observed (UNESCO, 1996). Also, an increasing reliance on the use of medicinal plants in the industrialized societies has been treasured to the extraction and development of many drugs and chemotherapeutics from these plants as well as from traditionally used herbal remedies (UNESCO, 1998).

Ethno-veterinary medicine (EVM) is a system that is based on folk beliefs, traditional knowledge, skills, methods and practices pertaining to the healthcare of animals that are rarely codified and transmitted orally from generation to generation (Mathias-Mundy and McCorkle, 1989; Tabuti et al., 2003).

Traditional veterinary medicine knowledge like other traditional knowledge systems is transmitted orally from generation to generation and it may disappear because of rapid socio-economic, environmental, technological changes and as a
result of the loss of cultural heritage under the pretext of civilization (Mathias-Mundy and McCorkle, 1989; Nfi et al., 2001).

This knowledge is based on close observation of animals and/or the oral transmission of experience from one generation to the next (Mathias-Mundy and McCorkle, 1989). The term, “Ethno-veterinary”, was coined by McCorkle in 1986. It recognizes the cultural context of traditional practices of livestock management and marks the beginning of systematic investigation of local traditions for the development of livestock population. This rich repository of local knowledge about almost all aspects of livestock care is intrinsic in most of the rural and tribal communities, although it is well nourished among the pastoral nomads all over the world.

Prevention, control and eradication of diseases among domesticated animals are major concern as diseases in animals lead to economic loses and possible transmission of the causative agents to humans. It is roughly estimated that nearly Rs 50 billion per annum are lost on account of livestock diseases in India. The high treatment cost, inaccessibility and indiscriminate use of antibiotics and hormone, which leads to user-unfriendly effects such as high antibiotic and hormone residues in the milk and other animal products, are some of the serious limitations of modern veterinary management.

Ethno veterinary practices have immense contemporary relevance. A Rapid Participatory Assessment model for finding out the best practices was developed and tested in four different geographical locations in Southern India. Nearly 120 plant resources for nearly 20 health conditions were studied during this initiative. 70% of the remedies had positive evidence from various systems of medicine and practical experience. 50% the ingredients of the remedies can be easily grown in
home herbal gardens and are locally available. 12 remedies have gone through pilot clinical studies and have been made into products, which are now being made through local enterprises. The National Dairy Development Board (NDDB), Government of India, has successfully implemented this programme and if promoted widely in a planned manner, can be of immense use for rural communities. Revitalization of ethno veterinary theory and practice holds the key to better animal health and hence to the prosperity of livestock farmers in rural India.

Moreover, herbal remedies have become more popular in the treatment of minor ailments, and also due to the increasing costs of animal health maintenance by using allopathic medicines. Indeed, the market and public demand has been so great that there is a great risk that many medicinal plants today, face extinction.

McGee (1998), surveying the use of spice and their medicinal properties around the world, concluded that spices serve the adaptive purpose of reducing food-borne disease. In reviewing relevant texts ranging from the preservative properties of spices against food spoilage to the presence of antimicrobial substances that lay claim to the elimination of pathogenic organisms in food preparations, the case is made for a more objective analysis and study of the medicinal properties of spices in vitro rather than in vivo. A whole range of plant-derived dietary supplements, phytochemicals and pro-vitamins that assist in maintaining good health and combating disease are now being described as functional foods and nutraceuticals.

Herbal medicines commonly referred as ‘phytomedicines’ exhibit some peculiar characteristics, namely: the active principles are frequently unknown; standardization, stability and quality control are feasible but not easy; the
availability and quality of raw materials are frequently problematic; well-controlled, double-blind clinical and toxicological studies to prove their efficacy and safety are rare. Empirical use in folk medicine is a very important characteristic; they have a wide range of therapeutic uses and are suitable for chronic treatments; the occurrence of undesirable side effects are less with herbal preparations, but well-controlled, randomized clinical trials have revealed that they also exist; they are usually affordable and cost less than synthetic drugs (Calixto, 2000).

The efficacy, safety and quality of raw medicinal plant materials and plant products depend on intrinsic or extrinsic factors. Accidental contamination by microbial or chemical agents during any of the production stages can also affect the quality, efficacy and safety. Medicinal plants collected in the wild may be contaminated by other species or plant through mis-identification, accidental contamination or intentional adulteration, all of which may have unsafe consequences. (Adewunmi and Ojewole, 2004)

The present work is intended to contribute to this growing body of knowledge by documenting selected information on the etiology of animal diseases and plant based ethno-veterinary curative techniques, clinical studies in the farmers’ premises to assess the efficacy of traditional healing methods and to find out the toxico- pathological studies in experimental animals to evaluate toxicities in liver and kidney which are induced by using mono herbal as well as poly herbal extracts. The studies were conducted among the rural folks of Cuddalore and Nagapattinam districts of Tamil Nadu.

In light of the above views about the age old animal health care system, the present research work has been undertaken with the following objectives:
1. To document the scattered knowledge of ethno-veterinary practices used for maintaining the health and curing diseases of livestock and pet animals in Cuddalore and Nagapattinam districts of Tamil Nadu.

2. Documentation of present status of ethno veterinary knowledge and herbal formulation for the treatment of selected diseases.

3. Clinical evaluation of selected diseases of livestock at field level.

4. Experimental studies in laboratory animals to assess the pathological consequences of mono as well as poly herbal recipes, if any.