V.SUMMARY

The results of the various studies and evaluation conducted on the selected ethno veterinary practices are summarized hereunder.

From the pre-documentation survey conducted, the need for training for sustainable poultry production was assessed and knowledge level of ethno veterinary practices was evaluated among the goat keepers of the study area.

Documentation of ethno veterinary practices was experienced as a difficult process and following are the observations at Cuddalore and Nagapattinam districts.

The practitioners have a faith in God and they spell out that the Divine power is transmitted to the medicinal plants which are raised nearby the temple and hence the art has to be carried out without the interference of modern techniques and the temples are known for their sanctity where ladies are abstained during their menstrual cycle. The help of qualified veterinarians were sought as the last resort when the condition of the animal worsens due to faulty medications.

The traditional practitioners showed a high degree of resistance in revealing their herbal recipes. It was noticed that, most of the traditional healers say that disclosure of herbal extract would spoil the efficacy of the poly herbal extract.

In order to collect medicinal herbs, the traditional healers used to travel long distance from their habitat their treasure was usually focussed in hilly regions and areas adjoining temples. The reasons cited by the traditional healers for this action are, Medicinal herbs which are found in their natural habitat especially in forest and hilly region is subjected to so many biotic stress which is responsible for
the better expression of active principles. The climate existing at the hilly region and the temperature and the soil pattern found in forest locality are highly suitable for the emergence and potency of the medicinal herbs. Traditional healers mostly do not prefer medicinal herbs which are grown in nurseries and herbal garden as the efficacy of the active principles are much lower and the animals are not responding to their treatment. October to November are the months preferred to travel towards Kerala and Karnataka for the collection of medicinal herbs. The collected medicinal herbs are sun dried in their own premises, stored and used for nearly a year or until next collection of medicinal herbs. The traditional practitioners believe that documentation of their recipes or photography of treatment regime would spoil the inheritance of such a great talent from forefathers and they believe in oral delivery of treatment procedures to their generation. Unfortunately, in many families, the next generation is least interested in the adoption of this age old tradition because of modern life style and educational status.

In the present study, documentation of ethno veterinary practices were carried out in selected areas of Cuddalore district and Nagapattinam district. The process of documentation gave many ideas about the prevailing situation of ethno veterinary practices in the study location. In Most of the places, ethno veterinary practices were performed by illiterate people. They are mostly school drop outs or from very lower strata of the community. In addition, local veterinary doctors and veterinary assistants were interviewed for their involvement in this traditional method of treating animal diseases.

The respondents in the present study were livestock keepers, traditional healers and veterinarians involved in ethno veterinary practices.
From the interviews conducted among the livestock keepers, traditional practitioners and veterinarians, there was a wide flow of thought which favoured the use of ethno veterinary practice. The greater percentage of the respondents opted for a safe, effective, cost effective medicine which must be sustainable enough for their animals. The interview also highlighted the need for effective documentation of this age old tradition because, this knowledge is with the aged practitioners and unless they care for delivering the system to the next generation or unless the next generation is ready to adopt this age old tradition, we may have to lose this tradition in due course of time. Hence, effective steps must be initiated to protect this age old tradition. It is a collective responsibility of the government, educational institutions and veterinary professionals to carry over these traditional practices to the next sustainable level. Moreover, a joint understanding with ethno botanists, pharmacologists, anthropologists, horticulturalists to validate these methods for the desired benefits. The documentation during this study echoed a severe threat to this tradition.

Plants constitute major part of EVM and most of the remedies reported in the present study are based on plants. Hence, there must be a plan to conserve our forest so that the medicinal plants will be protected and the same can be utilised by the traditional practitioners. Since ancient times, traditional village veterinarians have provided ethno-veterinary services to livestock and pet animals. In this developed socio-economic situation, veterinary services have often failed to reach the people residing in the remote areas of the country. Hence, many livestock farmers manage to treat their animals and birds without any financial investment.
adhesion molecule proteins in pathological processes and the wide use of medicinal plant extracts, further study on the effect of traditional medicines on this family of proteins is warranted.

Clinical evaluation was performed for Bovine mastitis, Foot and Mouth disease in cattle and coccidiosis in broiler chicken. As per the protocol designed, the clinical cases were evaluated for the medicinal preparation formulated by the traditional healers. The results of the evaluation was encouraging in terms of haematology and serum enzyme level which were estimated pre and post treatment period. Though the results were satisfactory, it was noticed that many treatment regimen were proposed by the local traditional farmers.

Hence, in order to assess the toxicity of medicinal herbs, experimental studies in white wistar rats were conducted by feeding 50 ppm and 100 ppm of aqueous extract of *Aloe vera*, *Ocimum sanctum*, *Phyllanthus niruri* and poly herbal aqueous extract and clinical samples were studied on fortnightly interval of day 15, day 30, day 45 and day 60. Though the above mentioned medicinal herbs gave expected results based on their individual medicinal properties, the poly herbal aqueous extract which was made up of the combination of all the three medicinal herbs when fed to rats disturbed the haematology and serum chemistry in a significant manner. This is a preliminary study which was supported by histopathological lesions of liver and kidney, the organs which are usually preferred for toxicity and drug compatibility studies. Hence, it is the need of the hour to assess individual active principle pertaining to the medicinal herbs in a particular locality. The medicinal herbs are to be standardized for their cultivation practices, soil type, agro-climatic conditions. Another important aspect to be concentrated is the awareness which has to be given about the toxic principles which are present in the medicinal herbs. This is quite evident from the fact that
many animals which were treated using ethno veterinary practices showed a gradual decline in its production. This is an indication of chronic toxicity in which liver deteriorates from its normal function. There are incidences that, after the cure is obtained using medicinal herbs, the animals fail to conceive in subsequent breeding. This showed a hormonal imbalance after the treatment. Hence, by considering the adverse effects of some medicinal herbs or indiscriminate usage of poly herbal formulations without any scientific validation are to be curtailed in the field level. The practitioners who practice ethno veterinary practices are to be formally trained in order to prevent indiscriminate usage of herbal preparation.

The richness of data on EVPs is a sufficient justification to extend the documentation process to other areas to collect valuable information on existing EVPs. The claims made by the EVM users and practitioners with respect to the efficacy of narrated EVPs should be validated through carefully planned studies. Many of the plants are new and not reported in literature. They should be checked for their therapeutic value and toxicity studies with further studies on quality. Safety and standardization of doses of effective ones should be conducted. Comparison should be made between the ethno-veterinary products and modern allopathic products for potency of the drugs and cost-effectiveness.

The results reported in the present study are preliminary findings. Many of the natural products used in these practices are as formulated by the local traditional healers which are cited in the literature. The formulations are considered environmentally sound and with few hazards can be solved by finding new alternatives in the form of natural products.

It is concluded that the efficacy of the traditional veterinary practices without a compromise in the normal physiology of livestock and birds is still open
to question and hence further research is needed to confirm the claims made by the
farmers and the traditional healers.