According to modern concept aerobiology is the study of scientific multidisciplinary approach concerned with the source of the air borne microorganisms and their identity, behaviour, movements and survival, their release dispersion deposition, impact on human, animal and plant systems. Aerobiology, however has now developed into an expanding sciences with interdisciplinary borders extending to plant pathology mycology, medicine, allergy, veterinary science, biodeterioration, on meteorology and cosmobiology. In spite of several distinct contributions, aerobiolgy is still in infancy.

Aerobiology of tropical climates is more important in respect of biodeterioration. Biodeterioration is an entirely different and new applied field of aerobiology in which the substrate, the organism and the environment interact. It does not include only the mildewing or rotting but also covers mechanical damage or fundamental important ailment of materials which are the valid manifestations of the interactions of organism and materials.
According to Edmond 1973, the Aerobiology is closely interlinked with meteorology, ecology, medicines and veterinary science etc. It is a scientific approach focussed on the transport of organisms and biologically significant materials. The various bioparticles present in the air include bacteria, pollen, spores, hyphal fragments, insects hair form mammals etc. Many of them are harmful to human beings, domestic animals and plants. In this way they are responsible for biopollution of the air. It is this ecological approach considering the significant role of air-born damage caused by Bio-deteriogens to stored food grains, paintings, library material, historical monuments extensive air monitoring becomes a need of the day. The studies of micro-organisms responsible for bio-deterioration its quantification, identification would help to suggest the methods for restoration and conservation of our ancient heritage.

Many diseases of commercial and domestic animals, i.e. foot and mouth disease, ephemeral fever, in cattle and the fowl are caused by air organisms, spores of Aspergillus fumigatus cause putrient metritis in cows, Aspergillosis, mycotoxicosis, facial eczema and other fungal disease are of great concern to veterinary scientists.
These organisms cause considerable damage by staining or foxing, some fungi destroy cellulose decomposition of binding materials, leather and plastic materials (Armitage, 1949), Kowalik et al. (1962) majority of micro-organisms (bacteria, virures, mycoplasmas, fungi etc.) responsible for plant disease are air borne. The damage caused by these plants pathogens is tremendous. The cause of plant disease may be considered as the interplay of three factors arranged in a triangle.

![Diagram of environmental pathogens host interplay](*).jpg

Environment, in terms of forecasting or prediction, is the microclimate in which the pathogen develops and the host is attacked for the triangle to be completely symmetrical, would demand that the host and pathogen such influence the environment to equivalent degree this is an unlikely event.

First part deals airspora over the vegetable market for the period of one year i.e. January 1990 to December 1990. The main idea for the present studies was to find out the relationship between occurrence of air-spora components with reference to various types of symptom caused by fungal spores and
meteorological factors. It was also intended to provide the qualitative and quantitative aspects of air spora, seasonal variations, effect of weather etc.

The second part deals with the study of airspora inside the Military food grain godown for the period of one year i.e. November 1990 to October 1991. The present investigations were carried out to find out the relationship between occurrence of airspora components with special reference to seed deteriorating symptoms types of fungal spores and meteorological factors.

The third part deals with the study of cellulase enzymetic activities of some fungal spores.

Cellolose is an insoluble polysaccharide and a polymer of β-glucose units joined by 1-4-glycoside linkage. Biological deterioration of cellulotic materials in the cell wall of plants result in a disease and ultimately it is due to the action of enzymes known as cellulytic or cellulases.

Probably de Bary (1886) was the first to record that fungus *Peziza sclerotium* secreted enzymes which dissolved cellulose. Later on, Ward (1888) noted cellulose decomposing activity in the macerated mycelium of *Botrytis* spp. The
studies have also revealed that the composition of the fungal spores causing the disease, deterioration of seeds. The results obtained and conclusions drawn would serve as useful basis of devising preventive systems which would enable efficient control of organisms actions.

The information about the pathogens (its release, dissemination, spread, infective ability, seasonal variation) will be helpful to have an efficient forecasting system and successful spray schedule to save our crops. Thus aerobiology is helpful both to agriculturists and plant pathologists in their ultimate aim of the protecting the crops.