INTRODUCTION

Variation in atmospheric mold load reflects broad seasonal and geographic influences. Meteorological factors, especially variation in humidity, profoundly affect mold growth. Temperature is also an important factor of influences. In general mold counts are higher during dry windy weather followed by a period of high relative humidity in temperate country. However, there were few papers reporting on air-borne fungi in the tropical zone.

The fact that climatic conditions affect the atmospheric concentration of the mold spore content has led many investigators in Holland, Spain, Denmark, Sweden, and the United States to incriminate molds as a cause of "climatic asthma".

Other population of air-born particles are pollens which various in shapes and size ranging from 100 to 3-5 u in diameter and some of microorganism with in dust particles.

Since man spends his life time at home and at work engaging in a recreation. Some occupations are associated with specific fungi. For example farmers come in contact with plant parasites and vegetation saprophytes. Farmer's lung disease is an example of what can result from contact with organisms in moldy hay straw. Fruit pickers have a great deal of contact with yeasts and Penicillium species which grow on fruits.

Other examples of epidemic allergy due to a specific fungus or group of fungi in man's occupational environment are; weavers' cough caused by moldy yarn, bagossosis by moldy sugar cane and cedar poisoning, a contact dermatitis found on forest workers by the products of Lichens (Prince & Morrow 1963).

Usually molds contaminate many kinds of food such as fruits, grains, meat, bread and rice. These foods often become moldy especially in humid weather. Vegetable and grains are a common source of contamination. Some food contain fungi or their products such as blue cheese, spiced meat and fermented drinks. Symptoms may develope after ingestion of food containing fungi. Mold allergy in some cases, apparently do not occure in other foods.

Molds occur primarily out doors, where they are grown on many species of vegetation and decomposed materials. Thus, the concentration of fungal spore outdoor atmosphere is higher than indoor, especially in agriculture areas. From these natural mold sources spreaded their ways to indoor where they can grow on some materials such as fabrics, leather, wall paper and other articles. Spores content of the indoor atmosphere also varies, some what are concentrations and kinds of fungi depending upon climatic conditions. The concentration of mold spore content of indoor atmosphere is higher in damp, warm and humid conditions than in dry and warm or in dry and cold areas.

Since moisture is required for fungal proliferation, damp areas within a home should be considered such as bathrooms, cellars, garages and walls any of these places provide an excellent enviroment for the fungal proliferation on a massive scale. In Thailand the relative humidity is high and provides a good condition for mold growth. It is very interesting to survey molds which are related to allergy.

Mold spores can cause allergy by inhalation in exactly the same way as the other allergens, such as pollens of weeds and other chemical substances. The chemical senitivity of inhaled fungal spore is now widely reconized. It should be considered among persons who are allergic to air-borne fungi.

Fungi that produce allergic spores are, in general, belonging to deuteromycetes group distinct from agents of the deep human mycoses. Thus the knowlege of these allergic fungi and their local pattern of occurences are essential for the allergist who approaches them before the treatment. The seasonal pattern of symptoms that mold sensitive patients present closely reflect their annual exposure to specific allergens. However, the period at which symptoms appear each year must be defined precisely whenever these patients are evaluated.

The purpose of the study was to survey the types of fungi and mold by using culture plate technique with various media throughout the year 1975, in order to obtain additional informations of the prevalence spores dispered in atmosphere of two areas in Bangkok. The specific strains of fungi related to allergy were identified and the number of colonies were recorded. Comparing fungal colonies th those obtained by others in the tropical countries was made. The ability of molds grown on different medium was studied. The conidiophore characteristic of some fungal species were recorded by photomicrograph.

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย