Contents

Abbreviations

A.	:	*Aspergillus*
P.	:	*Penicillium*
Cl.	:	*Cladosporium*
F.	:	*Fusarium*
Alt.	:	*Alternaria*
D.	:	*Drechslera*
M.	:	*Mucor*
R.	:	*Rhizopus*
N.	:	*Nigrospora*
S.	:	*Scopulariopsis*
C.	:	*Candida*
Cr.	:	*Cryptococcus*
Tor.	:	*Torulopsis*
Rh.	:	*Rhodotorula*
^{o}C.	:	Degree centigrade
O.D.T.S.	:	Organic Dust Toxic Syndrome
H .P.	:	Hypersensitivity Pneumonitis
A .B .P. A .	:	Allergic Bronchopulmonary Aspergillosis
A .F .S.	:	Allergic Fungal Sinusitis
Syn .	:	Synonym
Sp .	:	Species
µ m .	:	Micron

6 - Summary and Conclusion

Fungi are ubiquitous organisms that make up approximately 25% of earth's biomass. The air which we breath is seldom free from fungal spores, but their number and type vary with the season, weather, geographical location and position from large spore sources.

A total of 576 samples were collected from different places (288 samples from outdoor air and 288 samples from indoor air samples) representing geographical sites and different seasons of the year.

Sites selected were in the east , The Veterinary Clinic of Damietta, The Abattoir and poultry farm II, in the west , cereal store, drug store and wood cutting factory, in the north, milk factory The Hospital and The Library, in the south, feed factory, poultry farm I and cattle barn.

74045 colonies were isolated among which 37306 colonies in the outdoor and 36739 colonies in the indoor by the trapping method (exposed plate method) on Sabouraud's dextrose agar during two years 2000 & 2001.

In the outdoor 39 genus representing 110 species and 43 genus representing 121 species were obtained during years 2000 &2001 ,respectively.

In the indoor air 35 genus representing 115 species and 44 genus represented 123 species were isolated during years 2000 & 2001 respectively. It was observed from the obtained results that the maximum population of isolates in the outdoor/indoor air was in the south 6802/7306 colonies and 6769/ 7487 colonies during years 2000 & 2001, respectively and it was noticed that the minimum was in the north 3354/3045 colonies , 3235/3054 colonies during years 2000 & 2001 .

The obtained result declared that the maximum population of isolates in the outdoor was in the months April 1820 colonies and November 1625 colonies during year 2000 while the minimum population was in the months July 1334 colonies and July also 1208 colonies during years 2000 & 2001, respectively.

In the indoor the maximum population of isolates was in the months September 1793 colonies and April 1706 colonies during year 2000 and in the months December 1959 colonies and October 1709 colonies during year 2001, while the minimum population was in the months July 1275 colonies and July also 1214 colonies during years 2000 & 2001, respectively. The decrease in July may be due to the decrease in the relative humidity, while the increase in the population in the months November and December may be due to the high relative humidity in these months while the increase in April may be due to the increase in the wind velocity. The results achieved revealed that the most seasons in which there was more growth of fungi in the air were the Spring 4919 colonies where the wind velocity increased and also in the autumn 4800 colonies where the suitable temperature degree and relative humidity and whereas the Autumn is the season of the fall of trees papers whereas these plant debris considered a suitable substrate for fungal growth. This was during year 2000 and also during year 2001 where the maximum population was in the Autumn.

The results also declared that most predominant genus was Cladosporium where its mean incidence was (29.2%)of the total catch (28.5%) of the total catch in the outdoor and indoor air respectively during 24 months followed by *Aspergillus* (27.1%), (27.4%), *Penicillium* (17.8%), (17.0%), *Alternaria* (4.9%), (4.8%), *Trichoderma* (3.7%), (3.8%), *Yeast flora* (3.2%), (3.8%), *Fusarium* (3.4%) , (3.0%) , *Mucorales* (2.5%) , (2.9%) , *Candida* (1.6%), (2.1%), *Drechslera* (1.5%), (1.4%), *Mucor* (1.4%), (1.5%), *Paecilomyces*

(1.2%), (1.5%), *Scopulariopsis* (0.9%), (0.9%), *Rhizopus* (0.8%), (0.9%), *Nigrospora* (0.7%), (0.7%), *Mycelia sterilia* (0.6%), (0.7%), *Acremonium (Cephalosporium)* (0.4%), (0.3%), and *Aureobasidium* (0.5%), (0.4%) and other fungi.

It was found that the most predominant species in the outdoor and indoor air were *Cladosporium cladosporioides* where its mean incidence during 24 months was (61.2% of the genus and 18% of the total catch) and (58.2% of the genus and 17.0% of the total catch) followed by *Aspergillus flavus* (36.9%, 9.8%) and (39.4%, 11.2%),*A.niger* (33.1%, 8.9%) and (31.5%, 8.9%), *A.nidulans* (6.9%, 1.9%), (7.3%, 2.1%), *A.versicolor* (4.2%, 1.2%) and (4.1%, 1.3%), *A.glaucus* (4.6% , 1.3%) and (4.4% , 1.3%) *Penicillium citrinum* (13.6%, 2.4%) and (13.8%, 2.4%), *P.chrysogenum* (14.8%, 2.6%) and (14.5%, 2.6%), *P.viridicatum* (11.1%, 2%) and (11.4%, 1.9%), *P.corylophilum* (10.7%), 1.9% and (10.9%), 1.9%, *P.nigricans* (6.9%, 1.2%) and (7.4%, 1.2%), *Fusarium oxysporum* (35.6%, 1.2%) and (38.3%, 1.2%), *F.moniliforme* (23.5%, 0.8%) and (22.2%, 0.7%),*Alternaria alternata* (73.1%, 3.9%) and (79.1%, 3.8%), *Drechslera hawaiiensis* (62.3%, 1%) and(57.8%, 0.8%), *Mucor sphaerosporus* (26.5%, 0.4%) and (33.4%, 0.5%), *Rhizopus nigricans* (82.4%, 0.6%), (85.3%, 0.8%), *Candida pseudotropicalis* (39.0% of the genus and 19.8% of total Yeast flora) and (12.2%, 6.9%), *Cryptococcus laurentii* (75.7% of the genus, 12.5% of total Yeast flora) and (52.3% of the genus and 4.5%) of total yeast flora. The maximum and minimum incidence of different genera and species in different months and seasons in the outdoor and indoor air was recorded during the study period.

Also the population of the total isolates in the indoor and outdoor air of the different places was declared and it was noticed that the maximum incidence

in the indoor/outdoor air was during year 2000 in poultry farm I 2230 / 2593 colonies, cattle barn 2154 / 2332 colonies and in the feed factory 2418 / 2381 colonies, in the cereal store 2097 / 2067 colonies, while during year 2001 the maximum was in the feed factory 2378 / 2509 colonies, poultry farm I 2485 / 2145 colonies, cattle barn 2246 / 2493 colonies and it was observed that the minimum population in the indoor/outdoor air during year 2000 was found in the drug store 686 / 555 colonies, The Hospital 918/805 colonies, while during year 2001 it was found that the minimum population was in the drug store 696/514 colonies and The Hospital 892 / 795 colonies. The incidences of different genera and species in each place in the indoor and outdoor air was studied.

Also the hazard effect of the isolated fungi on the surrounding environment as man and animals and crops and biodeterioration of products was studied and summarized in that its pathogenic, allergenic, toxigenic and biodeteriorators .