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Research Papers



OCCURRENCE OF ASCOMYCETES FUNGAL SPORES OVER PADDY FIELDS AT RAIGAD IN KONKAN REGION.(Oryza sativa L.)

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ABSTRACT

Aeromycological study over paddy fields was carried out at Nagothane, Raigad District of Maharashtra in Konkan region. During this study 12 different types fungal spores belong to Ascomycotina was recorded. For this study volumetric Tilak's Air sampler was used. This study was carried out for complete two Kharif and Rabbi seasons respectively. Occurrence of fungal spores was correlated with the meteorological parameters.

Key Words: Paddy, Diversity, Ascomycetes, Meteorology etc.

INTRODUCTION:

Aeromycological study over paddy fields was carried out for two Kharif and Rabbi seasons Ist Rabbi season 11th January ,2003 to 30th April, 2003. Ist Kharif season 1st June, 2003 to 24th September, 2003. IInd Rabbi Season 21st December, 2003 to 26th April, 2004, IInd Kharif season 1st June 2004 to 30th September, 2004.During this period 12 different types of fungal spores belong to Ascomycotina was recorded. These spores cause diseases to the paddy crop which leads to the decrease in the productivity of this crop.

MATERIALS AND METHODS:

This study was carried out in paddy fields with the help of volumetric Tilak's Air sampler. This instrument was installed in field at constant height of 1.5 meter above the ground level.(Tilak and Kulkarni,1970) During this study infected paddy material was collected brought into laboratory, inoculated on potato dextrose agar plate and microscopic observation was made and correlated with fungal spores (Tilak S.T) and also different meteorological factors.

RESULT AND DISCUSSION:

During the study it was observed that the spores belonging to the groups, Deuteromycotina contributed 66.16%, Basidiomycotina 8.89%, Ascomycotina 24.56% and other types 0.35% of the total airspora.

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The other types, which included are fungal fragments, pollen grains and unidentified spore, contributed 0.35% to the total airspora.

Fungal spores belongs to Ascomycotina which includes Calospora , Chaetomium , Hysterium , Lacanidion , Leptosphaeria , Massarina , Meliola , Monascus , Otthia , Pleospora , Pleomassarina , Xyleria etc causes different types of diseases to this paddy crop like ,Black kernel, Blast, Narrow brown leaf spots, Kernel spotting ,Root rot,Seedling blight, Sheath blight, Stack burn, Seed rot and seedling diseases etc. (S.H.Ou)

Occurrence of fungal spores was correlated with the meteorological parameters like rainfall, humidity, wind velocity etc. It was observed that rate of release of the fungal spores directly proportional to these parameters. Hence productivity of paddy crop is less in kharif season as compare to rabbi season.

Sr.No.	Spore Types	% of spore I & II Kharif			% of spore I & II Rabbi		
		Season			Season		
		Ι	II	% Mean	Ι	II	% Mean
ASCOMYCOTINA							
1	Calospora Nitschke	2.33	2.69	2.51	2.02	2.31	2.16
2	Chaetomium Kunz ex Fr.	2.44	2.69	2.56	2.25	2.27	2.26
3	Hysterium Tode ex Fr.	2.51	2.58	2.54	2.36	2.10	2.23
4	Lacanidion Endl.	2.44	2.32	2.38	2.07	1.97	2.33
5	Leptosphaeria Ces & de Not.	1.65	1.43	2.04	2.13	2.51	2.32
6	Massarina Sacc.	2.40	2.16	2.28	2.03	3.08	2.69
7	Meliola Fr.	2.38	2.55	2.46	2.31	1.91	2.11
8	Monascus Van Teigh	2.44	2.52	2.48	2.07	2.38	2.22
9	Otthia Nke.	2.45	2.47	2.46	2.15	2.17	2.16
10	Pleospora Rabh.	1.99	2.28	2.13	2.08	1.71	1.89
11	Pleomassarina Speg.	2.23	2.44	2.33	2.17	1.09	1.63
12	Xyleria	0.00	0.00	0.00	0.75	0.00	0.35
OTHERTYPES							
1	Fungal Fragment	0.07	0.12	0.09	0.18	0.00	0.09
2	Pollen grains	0.06	0.11	0.07	0.11	0.16	0.13

TABLE: I OCCRRENCE OF ASCOMYCETES FUNGAL SPORES OVER PADDY FIELDS AT RAIGAD IN KONKAN REGION .(ORYZA SATIVA L.)

CONCLUSION:

This study would be helpful an efficient diseases forecasting system and preventing paddy crop from different fungal diseases and also helpful to the increase the productivity of this crop in Raigad

Konkan Region.

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REFERENCES :-

Anonymous (2005): Research Review Report on Rice, Maharashtra Agriculture University.

* S.T.Tilak and R.L.Kulkarni (1970): Airborne Fungal spore and Pollen grains.

Sreeramulu T (1970): The airspora of crop fields and its application. J. Palynol: 6:31-38.

▲ S.A.Dhaware (1976): Taxonomy of some Ascomycetes and Airspora study over paddy field

▲ S.H.Ou: Fungal Diseases on Rice.

S.K.Rajurkar (2008): Aeroallergent in Vegetable market. Bio-Nano, pp (95-99)

AP.P.Ahire and V.B.Kadam (2008): Aeromycological (Deuteromycetes) study at Nashik District of Maharashtra, Bio-Nano, pp (127-128)

• V.P.Mali, J.S.Ambhore, B.N.Pande (2008): Aeromycological survey of fungal spores in two Rabbi Seasons over Jawar field. Bio-Nano, Vol–II, pp (108-114)

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