

PRIMARY ARTICLE

Rhizosphere Mycoflora And Soil Analysis Of Ground Nut

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ABSTRACT

Present review paper is a practical implementation of theoretical ideas. It is new ideas discover and identified in various sector of national economy. He explores the possibility of starting a venture in agriculture trade and industries.

Tolerance of Brassicol by rhizospheremicro fungi of groundnut was study by food poisoning soil (FRSD) technique. Fungal population wear observed up to 1500 μ /ml in the plate. There eight to nine fold reduction in the population. A total of 94 species of fungi are recorded, seven species including phytophithora rubra did not tolerate seven 100 μ /ml whereas species like Rhizopus stolonifer, Aspergillus carbonarius and A. niger showed their resistance at 1500 μ /ml.

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Keyword: Groundnut, RhizosphereMycoflora, Soil Analysis.

REVIEW OF LITERATURE

In recent year pesticides are extensively used in controlling crop pests and diseases. These synthetic chemical persist in the soil and exert harmful effect on the growth and metabolism of soil micro-organisms.

Alexander (1969) reported that soil microorganism tolerate certain fungicides and their by survive tolerance of fungicides by pathogenic fungi is reported same researcher (Subba Rao N.S. (1977), Saler and Gangawane (1980), Saler, R.S. and Reena Chauhan (2006), Joffe, A. Z. (1969)

However Saksena (1974) studied the resistance of soil resistance. Soil of groundnut treated with sufala, NPK, Urea and formalin and same fungal species only present in control and were absent in treated rhizospaere and soil. Similar result found by Lakshmi Kumari et. al(1972)

MATERIAL AND METHOD

Rhizosphere soil can be separated and a soil suspension obtained by shaking roots in aliquots of sterile water from which subsequent dilution are made. One millimeter of the appropriate dilution is placed on suitable agar media for enumerating bacteria, actinomycetes and fungi.

Techniques In The Study Of Rhizosphere:-

The soil dilution & plate count method is data obtained an estimated of the total population of fungi, actinomycetes & bacteria per 9 of soil can be made. There are many method are used such as soil plate technique, soil box technic, contact side technique, artificial rhizospere. The using fluorescence microscopy, dilution of soil is mixed with 1% Difco bactoagar solutions are observed on glass side.

Sample preparation from four sampling stations A, B, C. Urea, NPK and formaldehyde add in sampling station separately. And investigation is carried out weekly up to 45 days.

RESULT AND DISCUSSION

No of fungal colonies 10^3 /gm. over dry soil in rhizosphere (R) and soil (S) of ground nut treated with Urea, NPK, and Formaldehyde. This is observed after 45 days.

	Urea	NPK	Formaldehyde
Rhizosphere(R)	18.78	28.45	18.20
soil (S)	9.18	9.98	3.4
R/S	2.04	2.85	5.35

As per table no.1 when urea is treated there was negative correlation between fungal population in rhizosphere (R) and soil. When NPK is treated, there was negative correlation. The fungal population in rhizosphere one fold increased rhizosphere and more increased compare with soil. When formaldehyde is treated, there was negative correlation. The fungal population one fold decrease.

Percentage occurrence of fungi in rhizosphere (R) and soil (S) OF groundnut treated with Urea, NPK, and Formaldehyde.

Sr No	Fugal species	Urea		NPK		Formaldehyde	
		R	S	R	S	R	S
1	Alternaria alternata	-	-	-	-	3.84	1.42
2	Aspergillus flavus	9.30	5.68	-	-	-	-
3	Aspergillus flavus	13.15	6.48	-	-	4.42	3.32
4	Aspergillus carbonarius	-	-	3.14	-	-	-
5	Aspergillus niger	-	-	2.14	1.23	-	-
6	Chaetomium glomerata	-	-	-	-	-	3.49
7	Cladosporium sps	2.46	2.44	-	-	-	-
8	Cladosporium herbarum	-	-	-	6.82	3.46	-
9	Fusarium moniliforme	-	-	-	-	2.48	1.43
10	Fusarium semitectum sps	5.26	-	-	-	-	-
11	Helminthosporium sps	6.58	1.23	-	-	-	-
12	Mucor sps	10.88	10.24	-	-	-	3.42
13	Phoma glomerata	-	-	3.12	2.18	-	-
14	Rhizopus sps	-	-	3.58	2.16	-	-
15	Rhizoctonia solani	3.52	-	-	-	-	-

Table no.2 shows that total seven species were recorded in the rhizosphere of ground nut treated with urea. In rhizosphere Aspergillus flavus represent highest percentage while Cladosporium sps represent lower. When rhizosphere of ground nut

treated with NPK, there was five fungal species recorded. In the rhizosphere *Rhizopus* spp represent highest percentage while *Aspergillus niger* represents lowest percentage. Total six fungal species were recorded in the rhizosphere of ground nut treated with Formaldehyde. In the rhizosphere *Aspergillus flavus* represent high percentage.

CONCLUSION

The fungal population reduced significantly in the rhizosphere of ground nut grown in sterilized plot. The highest rhizosphere effect was exerted by the plant grown in NPK treated plot. In rhizosphere *Aspergillus carbonarius*, *A. fumigatus* reduced in plot sterilize. In soil *A. carbonarius* *semitectum* were influenced by all chemical, NPK however no effect.

Altogether 15 fungal species were recorded in rhizosphere and soil of ground nut treated with Urea, NPK and Formaldehyde and same fungal species only present in control and were absent in treated rhizosphere and soil. This indicates that the root exudates composition in their respective rhizosphere and soil region is different. Above result will give satisfactory explanation. Similar result root exudates of high plant been shown by Rovira (1965), Laxshami kumari (1972). Gangawane and Deshpande (1976) reported effect of ground nut cake inhibit fungal population, as course of decomposition of fatty substances released from ground nut cake.

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