UTILIZATION OF SOME MEDICINAL PLANTS AGAINST FUSARIUM oxysporium f.sp.udum.BUTLAR VAR. CROTOLARIAE (KULKARNI) PADWICK CAUSING SEEDLING BLIGHT OF PIGEON PEA

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The leaf extract of six medicinal plants were tested against Fusarium oxysporium f. sp.udum. Bultar Var. Crotolariae (Kulkarni) padwick causing seedling blight of Pigeon pea. An extract of Aegle marmelos Carrea., Azadirachta indica A.Juss., Ocimum sanctum L., Catharanthus roseus (L).G.Don., Tridax procumbens L.and Vitex negundo L. These extract were tested against Fusarium oxysporium f.sp.udum. which was isolated from infected Pigeon peaseeds.

Introduction-Medicinal plants have been used as a source of medicine from ancient times. The widespread use of herbal remedies and healthcare preparation are described in ancient text, such as the Vedas and Bible. These are obtained from commonly used traditional herbs and medcinal plants and have been traced to the occurrence of natural products with medicinal properties.

The plants selected were Aegle marmelos Carrea., Azadirachta indica A.Juss., Ocimum sanctum L., Catharanthus roseus (L). G.Don. Tridax Procumbens L.and Vitex negundo L.

Materials and Methods :- Plants were collected from udgir and area of Mukhed (Barahali). The plants were identified in the laboratory at research center for Advanced Studies in plant Sciences, P.G.Department of Botany, Shivaji Mahavidyalaya, Udgir Dist- Latur.

The effect of leaf extract was studies against the Fusarium oxysporium f.sp. udum. The leaves of these plant were seperated and washed with sterill distilledwater.100 g of leaves were crushed by using morter and pestle using 10% alcohol.The extract was filtered using muslin cloth. The plant extract is added in 100 mL of10% ethyl alcohol. The plant extract was boiled till the alcohol is evaporated.

The required concentration of plant extracts were obtained by taking 2.0,4.0,6.0,8.0, and 10.0 mL in 100 mL of warm agar PDA media.

The different concentrations of plant extract prepared in agar media were 2.0,4.0,6.0,8.0 and 10.0 mL %. The media were poured in sterilized petriplates and allowed to solidify. These plates were inoculated by 4mm disc of the Fusarium oxysporium f.sp.udum in the center aseptically. These plates were incubated at $28+1^0$ C. The observatoins were recorded in the form of linear growth of fungal pathogen in millimeter (mm) .The linear growth was measured upto the growth in control plate when filled completely. Effect of leaf extract is studied by food poisoning technique (Biswas Sbrata et al.1995).

Result & Discussion :-

The effect of leaf extract of Aegle marmelos was observed. The results are depicted in the Table 1. From the results it is clear that, as the concentration of Aegle marmelos increases there was decrease in linear growth. Linear growth. Linear growth on control plate was 55mm on 8^{th} day of incubation. The linear growth decreases at higher concentration.

The linear growth decreases at higher concentration . The linear growths at 2.0%,4.0%, 6.0% and 8.0% concentrations were 28mm, 24 mm,18 mm and 12 mm respectively on 8^{th} day. This means that at 4.0% conctentration, the maximum inhibition occurred . At 10.00% concentraction there was complete inhibition of the fungus.

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Table 1. Effect of Aegle marmelos Carrea on linear growth of Fusarium oxysporium f.sp.udum. Butlar Var.Crotolariae (Kulkarni)Padwick.

Conc. (%)	Linear growth (mm) Incubation period (Days)							
	1	2	3	4	5	6	7	8
1.0	07.00	10.00	14.00	18.00	22.00	24.00	25.00	28.00
2.0	04.00	06.00	08.00	10.00	16.00	19.00	21.00	24.00
3.0	02.00	04.00	07.00	09.50	11.00	14.00	16.50	18.00
4.0	00.00	00.00	00.00	00.00	00.00	07.00	09.00	12.00
5.0	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
Control	15.00	18.00	22.00	25.00	29.00	36.00	40.00	55.00
S.E. +	2.13	2.49	3.17	3.70	4.38	4.76	6.13	6.93
C.D.at p = 0.01	8.58	10.03	12.77	14.91	17.65	19.18	24.70	27.92
C.D. at p=0.05	5.47	6.39	8.14	9.50	11.25	12.23	15.75	17.81

REFERENCE

* Annapurna, J.and lyengar, D.S. (1989). Antimicrobial activity of leaf extract of Annona Squamosa. Pesticides 23 (1) : 43-44.
* Bambode, R.S. and Shukla, V.N.(1973). Effect of leaf extracts of Punica granatum against Curvularia lunata, Alternaria solani, Helminthosporium sativum, Helmnthosporium speciferum , Fusarium moniliforme and Rhizoctonia bataticola. P.K.V.Res.J.:1-8.
* Bhommick, B.N.and Choudhary, B.K.(1982), Antifungal activity of leaf of medical plants on Alternaria alternata. India Bot. Reptr. 1(2) : 164.
* Bhale, U.N., Kamble, S.S. and Gangawane, L.V. (2005). Effect of plant extract on growth and spore germination in Fusarium oxysporum f. spinaciae causing wilt of spinach. Bioinfolet 2 (2) : 122 - 125.
* Dhavle, S.D., Kareppa, B.M. and Kadam, A.S. (2008). Effect of leaf extracts of Datura Stromonium on linear growth of Colletotrichum capsici. Bioinfolet 5(2) : 141-142.
* Dhavle.S.D., Kareppa, B.M.., Maske, V.S. and Rathod, L.R. (2009). Utilization of Allium cepa leaf extracts on liner growth of Collectrichum capsici (SYD) Bionano frontier Vol. 2(1) jan.
* Gohil, V.P. and Vala, D.G.(1996).Effects of extracts of some medicinl plants on the growth of Fusarium monliforme. Indian J. Myco.Pl.Pathol. 26(1) : 110-111.
* Kamble, S.S. and Bhale, U.N. (2001). Antifungal activity of plant extracts against Fusarium udum. The incitant of pigeon pea wilt. J.of Sci. Dr. B.A.M.U.Aurangabad Vol. XXXI (8) : 39.