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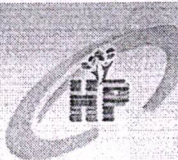
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attention to public interest, stewardship and solidarity considerations, while the private sector will bring access to finance, knowledge of technologies, managerial efficiency and entrepreneurial spirit. By ensuring that equity concerns are taken into account, including the need to prevent discrimination and exploitation, ensure continuity and stability of services, and encourage social cohesion, it is assumed that the public sector can collaborate productively with the market and tame its excesses.

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## Efficacy on growth of Macrophomina Phaseolina with Effect of acetone rhizome extract of Curcuma longa L.

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#### Abstract:

Macrophomina phaseolina (Tassi) Goid is a soil borne fungus causes root rot diseases to medicinal plant Sarpagandha (Rauwolfia serpentina). The fungus infects the root, lower stem and leaves of Sarpagandha. Over 500 plant species infects by Macrophomina phaseolina fungus is widely distributed in the United States (Wyllie, 1988). The efficacy of Curcuma longa rhizome extract against Macrophomina phaseolina was studied by using acetone as solvent at different concentrations i.e., 1.00, 2.00, 3.00, 4.00 and 5.00 % for their antifungal efficacy.

**Keywords-** Macrophomina phaseolina, Sarpagandha, Curcuma longa, Acetone, etc.

#### Materials and Methods:

The study of antifungal activity of Curcuma longa rhizome extract on Macrophomina phaseolina. Locally available Curcuma longa rhizome used i.e., rhizome of Curcuma longa was tested by poisoned food technique in vitro as used by Shiva et.al, (2008) and Francis Borgio, et.al, (2008) to know their inhibitory effect on the growth of Macrophomina phaseolina.

**Preparation of Acetone plant part extracts:**

Healthy fresh rhizomes were taken, washed thoroughly with fresh water and finally rinsed with sterile distilled water and dried.

Fifty gram of dried, rhizomes of *Curcuma longa* was cut into small pieces and grinded in a grinder to make fine powder and then extracted in 50 ml Acetone. Extracts thus, obtained were filtered through double layered muslin cloth in 150 ml flasks and plugged. The extracts then autoclaved at pressure 15 lbs for 20 minutes. Potato Dextrose Agar (PDA) medium was prepared and sterilized at 15 lbs pressure for 20 minutes. The sterilized extracts were considered as standard plant extracts and used for the testing of antifungal activity. The different concentrations were prepared i.e., 1.00, 2.00, 3.00, 4.00, 5.00, 6.00, 7.00, 8.00, 9.00 and 10.00 percent. The 1 ml extracts of different concentrations were individually added in 15 ml melted, cooled and sterilized PDA at the time of pouring in the petriplates and incubated at room temperature. After solidification a 5 mm disc of actively growing 7 days old pure culture of *Macrophomina phaseolina* was incubated aseptically in the centre of plate. Three repetitions were made for each treatment. Medium without phytoextracts served as control. The observations of fungal growth in diameter were observed and recorded and percent growth inhibition was also worked out. Khajista, et.al., (2013).

The sclerotial formation was determined by observing number of sclerotia per microscopic field

**Experimental results and discussion:**

The effect of *Curcuma longa* L. against *Macrophomina phaseolina* with acetone as solvent was tested at different concentrations i.e., 1.00, 2.00, 3.00, 4.00 and 5.00 % for their antifungal property with the help of standard poisoned food technique.

**Table -1: Effect of acetone rhizome extract of *Curcuma longa* L. on growth of *Macrophomina***

*phaseolina*.

Incubation Period (Days)	Control (Acetone)	Percent inhibition				
		Concentration (%)				
		1.00	2.00	3.00	4.00	5.00
1	8.15 (5.22)	15.25 (8.77)	19.50 (11.24)	24.80 (14.35)	28.46 (16.53)	28.75 (16.70)
2	10.24 (5.87)	35.66 (20.89)	40.80 (24.07)	45.45 (27.03)	49.54 (29.69)	50.75 (30.49)
3	11.55 (6.63)	50.90 (30.59)	53.00 (32.00)	55.75 (33.88)	56.76 (34.58)	57.37 (35.00)
4	13.00 (7.46)	59.75 (36.68)	62.38 (38.59)	67.37 (42.35)	67.75 (42.64)	68.68 (43.37)
5	16.44 (9.46)	69.65 (44.14)	72.46 (46.43)	75.58 (49.52)	76.45 (50.53)	76.90 (50.78)
6	18.35 (10.57)	75.59 (49.57)	79.65 (53.43)	82.54 (56.80)	85.35 (60.05)	87.85 (63.46)
7	22.10 (12.76)	81.95 (56.13)	87.15 (62.97)	88.92 (62.78)	89.35 (63.32)	94.25 (70.51)
S.E ±	0.42	2.95	3.61	3.22	3.42	3.73
C.D at 5%	1.30	9.08	11.13	9.92	10.53	11.49

Figures in parenthesis are ARCSIN transformed value.

*Curcuma longa* efficacy at 1 % concentration shows 15.25 to 81.95 %, at 2% concentration gives 19.50 to 87.15 %, at 3 % concentration shows 24.80 to 88.92 %, at 4 % concentration gives 28.46 to 89.35 % and at 5 % concentration gives 28.75 to 94.25 % inhibition of the pathogen as mentioned in table 1 i.e., growth with acetone solvent recorded at 1 to 7 days of incubation. The efficacy of *Curcuma longa*, at 5 % concentration gives maximum inhibition of growth of pathogen; the increase in the concentration gives maximum inhibition of the growth.

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## Teaching Commerce at undergraduate level in rural areas: Problems and Remedies

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### Introduction:-

Today's world is totally commercial. Each and every area of today's life-style is directly or indirectly connected with commerce only.

But unfortunately the education in commerce faculty in rural areas is not up to the mark in comparison to that industrialisation attracts youngsters from rural area to cities only to earn money in companies as labours. These youngsters are unaware of taking commercial education and get connected with the rest of the world this may decrease the population in big cities and can increase more and more employment opportunities in rural areas it can give these youngsters an opportunities to live a happy prosperous and wealthy life it will help us to fulfil the dream of our respected Bapuji who said Let's go to villages.

### Objectives of the study:-

1. To find out reasons behind low strength of student in commerce faculty.
2. To inculcate the importance of commerce in the minds of students.
3. To know the problems faced by students learning in commerce faculty.
4. To enhance and enable the students to faced and overcome these problems.
5. To enhance more and more students to ward commerce field by good communication, syllabus and teaching techniques.
6. To accept modern and highly

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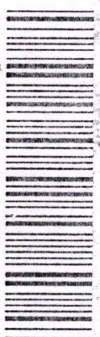
This is to certify that the review board of our research journal accepted the research paper/article titled EFFICACY ON GROWTH OF MACROPHOMINA PHASEOLINA WITH EFFECT OF ACETONE RHIZOME EXTRACT OF DR./MR./MISS/MRS. BUDHBHATE MADHAV MAROTIRAO CURCUM LONGA L. It is peer reviewed and published in the Issue 64 Vol. 03 in the month of APRIL-2020

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