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The Growth of *Alternaria Tenuis* Auct., and *Curvularia Lunata* (Wakker) Boedijn, the Common Leaf Spot Pathogens of Ornamental and Cultivated Plants

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ABSTRACT: Ten Homoeopathic Drugs of various potencies were evaluated *in vitro*, for their inhibitory effect on *Alternaria tenuis* Auct., and *Curvularia lunata* (Wakker) Boedijn causing leaf spot diseases of ornamental and cultivated plants of economic value. Bacillinum 30, 200, 1000; Lycopodium 200; Fagopyrum 200, 1000; Ustilago 1000; Petroleum 6, 200, 1000; Sepia 30, 200, 1000; Sulphur iod. 1000 and Mezerium 1000 caused 100% inhibition against *A. tenuis*, while Fagopyrum 200; Ustilago 6; Petroleum 200 and Sulphur iod 6, 1000 only could cause 100% inhibition against *C. lunata*.

INTRODUCTION

Recently, several workers^{1,2,4,5} have used homoeopathic drugs to inhibit the growth of fungal and viral pathogens of plants. The present study was undertaken to screen a few homoeopathic drugs in various potencies for their inhibitory effect against *Alternaria tenuis* Auct., and *Curvularia lunata* (Wakker) Boedijn, the common leaf spot pathogens of ornamental and other cultivated plants of economic value, *in vitro*.

MATERIALS AND METHODS

Ten homoeopathic drugs, viz. Bacillinum, Lycopodium, Fagopyrum, Ustilago, Petroleum, Tellurium, Sepia, Sulphur, Sulphur iod. and Mezerium of different potencies were screened for their effect on the fungal growth by poisoned food technique³. Different potencies of these drugs were prepared in double distilled water on centesimal scale. Five ml of each potency was mixed in 30 ml of autoclaved potato dextrose agar medium, just before its gelling and poured into each sterilized petriplate. The plates were then inoculated with the inoculum bits taken from 5 days old colonies of fungi at the centre of the plate. The petriplates were then incubated at 28°C for 7 days. Similarly, controls were run without any treatment. The diameter of each fungal colony was measured and the per cent inhibition of these fungi was calculated in comparison to control. Each datum shown in the table is an average of two independent determinations.

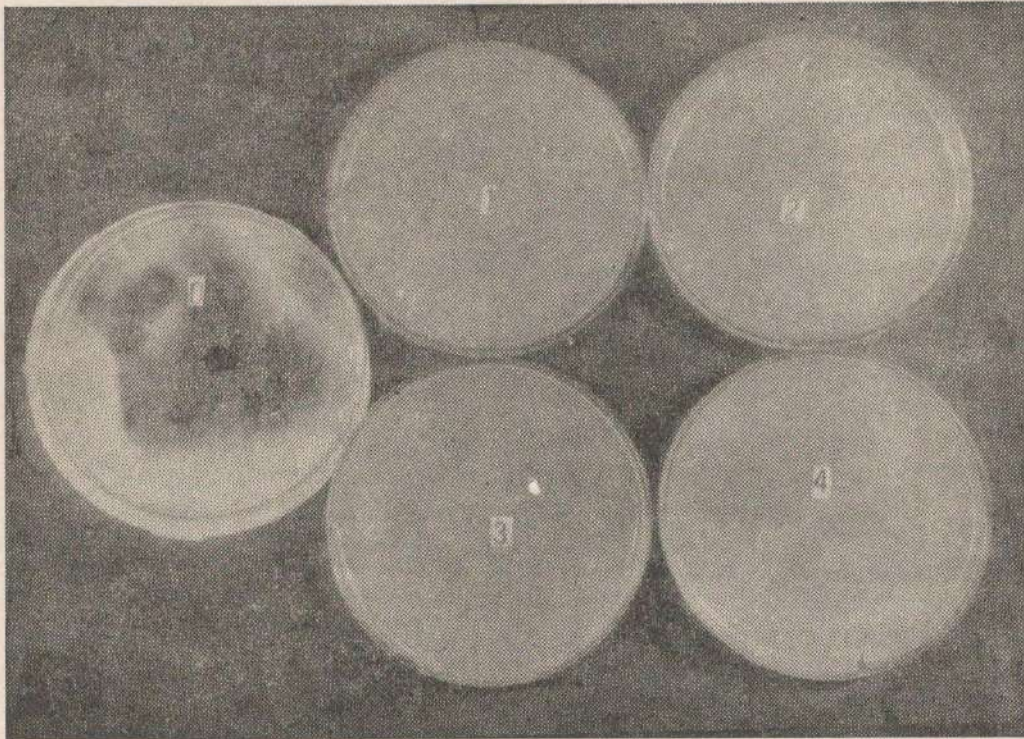
RESULTS & DISCUSSION

A perusal of data (Please see Table) reveals that most of the drugs caused significant inhibitory effect against the test fungi. However, only a

TABLE
EFFECT OF HOMOEOPATHIC DRUGS ON THE GROWTH OF *A. TENUIS* AND *C. LUNATA*,
THE COMMON LEAF SPOT FUNGI

Drug	Potency	Percentage inhibition of growth	
		<i>A. tenuis</i>	<i>C. lunata</i>
1. Bacillinum	30	100	60
	200	100	55
	1000	100	25
2. Lycopodium	30	20	15
	200	100	30
	1000	44	48
3. Fagopyrum	6	40	30
	200	100	100
	1000	100	85
4. Ustilago	6	30	100
	200	0	25
	1000	100	30
5. Petroleum	6	100	80
	200	100	100
	1000	100	45
6. Tellurium	30	20	50
	200	56	60
	1000	40	15
7. Sepia	30	100	48
	200	100	50
	1000	100	52
8. Sulphur	1000	0	92
9. Sulphur iod.	6	40	100
	30	50	45
	1000	100	100
10. Mezerium	6	40	10
	200	80	40
	1000	100	60
— Control	—	—	—

limited number of drugs caused 100% inhibition in varied potencies against the fungi. Out of the two test organisms, *A. tenuis* was more affected by these drugs as compared to *C. lunata*. Bacillinum 30, 200, 1000; Lycopodium 200; Fagopyrum 200, 1000; Ustilago 1000; Petroleum 6, 200, 1000; Sepia 30, 200, 1000; Sulphur iod. 1000 and Mezerium 1000 potencies showed 100% inhibition against *A. tenuis*, while Fagopyrum 200, Ustilago 6, Petroleum 200 and Sulphur 1000 only could cause 100% inhibition against *C. lunata*. From the above data, it is clear that Bacillinum, Fagopyrum, Petroleum and Sepia are more promising drugs since almost all their potencies tried caused 100% inhibition to the growth of *A. tenuis*. The above mentioned potencies of various drugs were selected for further investigation through field trials so that the role of these drugs in controlling various diseases caused by these fungi may be determined.



Culture plates inoculated with *A. tenuis*, a common leaf spot fungi and treated by homoeopathic drugs. 0 = Control, 1 = Bacillinum 30, 2 = Fagopyrum 200, 3 = Petroleum 6, 4 = Sepia 30.

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Editorial comments: The authors have done an excellent work. They have opened up a new field of research in Homoeopathy. However, the present one appears to be only a qualitative work; they should work further for quantitative evaluation. They should add paras on the pathogens and their expressions, and why certain medicines are selected among many homoeopathic medicines. Inoculum bits, controls should be specified. It would be worthwhile to have a control against a known pesticide, if possible.