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Growth and Morphology of *Gnomonia leptostyla* in various culture media

Kazem Kakolvand

Master of herbal diseases at Lorestan University

Corresponding author: Kazem Kakolvand

ABSTRACT: Juglans Anthracnose disease is the most important walnut fungi from most Iranian crops. In order to investigate the effect of mixing fungicides with suitable culture medium for control of Juglans anthracne disease , Experiment on different environments cultivating fungi To select the best culture medium suitable for fungi causing the disease , In the appropriate environment, that growth fungus causes the disease Contains**:** BAB,WA, OMA ،MA ،NA , . PDA ،CMA، WLEA Done in the laboratory environment in the years 2018-2019 That way After collecting similar samples of leaves From an infected area of the disease And sterilize with 1% sodium hypochlorite solution On any fungi culture medium Piece of 10 mm it placed in the middle of Petri Dish The culture was stored in a laboratory at 21 ° C, relative humidity of 50% and 12 hours of light and 12 hours of darkness and at 14, 9, 6, 3, 2 and 21 days after that , evaluated Characterization of developed colonies such as colony diameter, growth pattern, mycelium density of fungi The experiment was conducted in a completely randomized design with 8 replications in 3 replicates under identical conditions Showed the results that The highest growth rate of mycelial fungi was caused by the disease on the OMA culture medium.and BDB Was the weakest fungi culture medium causing disease. WA was the most suitable culture medium to isolate the fungus causing the disease

Keywords**:** PDA, Fungus, Mycelium

INTRODUCTION

Juglans tree is one of the most valuable gardens tree and native forest of Iran. It is a multipurpose tree that has high protein and nutritional value**.** It is a worthwhile economic product. Juglans can be used in various parts of the industry and medicine (Amar ghasemi 1388) According to FAO statistics in 2009, Iran is the third largest walnut producer in the world**(** FAO, 2011) Anthracnose disease agent in walnut Ascorpic fungus from the order (Diaportales) And called Ophiognomonnia leptostyla The name of its non-sexual form is Marssoniella (Sogonov et al, 2008) Saremi et al., 2002. The isolation and growth of this fungus on the potato culture media of Dextrose Agar and maize agar at 20 and 25 degrees Celsius with the period of light period Alternate They saw white-gray fungi colonies and the corn agar meal was more suitable for the growth of this fungus

Materials and methods

Fungal culture media were prepared, Selected 9 Petri dishes 6 mm in diameter, It was used to pour about 10 ml of culture media, picking up from leaf samples infected with a disease of a 7 mm piece And placed under sterile conditions with three replications on culture media, of Petri Dish The culture was stored in a laboratory at 21 ° C, relative humidity of 50% and 12 hours of light and 12 hours of darkness and at 2, 3, 6, 9,14 and 21 days after that , evaluated Characterization of developed colonies such as colony diameter, growth pattern, mycelium density of fungi The experiment was conducted in a completely randomized design with 8 replications in 3 replicates under

identical conditions**.** Was used to analyze the variance of the data from the software MSTAT-C, Data grouping was performed using Duncan's multi-domain test.

Results and Discussion

No significant difference was observed in terms of morphology, color, or colony growth pattern but there were differences in the rate of growth of the fungi that causing the disease Growth of fungi in WLEA, WA, CMA, OMA cell culture was very rapid The highest rate of colony growth was observed on OMA, which the mushroom colony increased by 5.3 mm after two weeks. The BAB medium, the growth medium of yeast fungi, failed to produce a good growth of the fungus, and was the weakest medium for the growth of this fungus. In the MA medium, the mushroom first grows with low density hyphae, but colonies became denser In PDA medium, colonies had very dense mycelia. In a medium of WA, the mushroom grown with very non-condensing hyphae, the colony's layout and size were not easily detectable**.** CMA culture medium had a relatively limited and higher in density center of colony. In WLEA medium containing only agar and dried leaves of dried walnut, growth was observed very well.rapid growth, so that after OMA, the fastest growing fungus in this environment was obtained**.** In culture media NA growth of fungus was(table1).

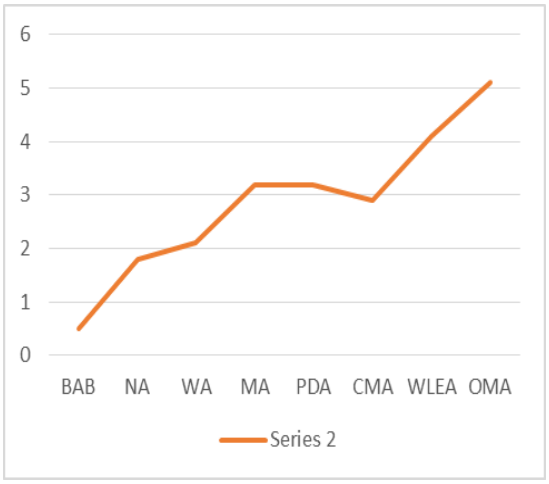

Figure1. after three days

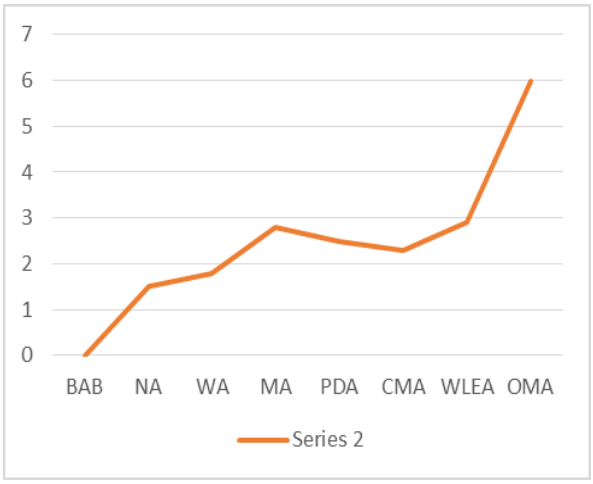

Figure2. after six days

Growth process of G. leptostyla on culture media during different days

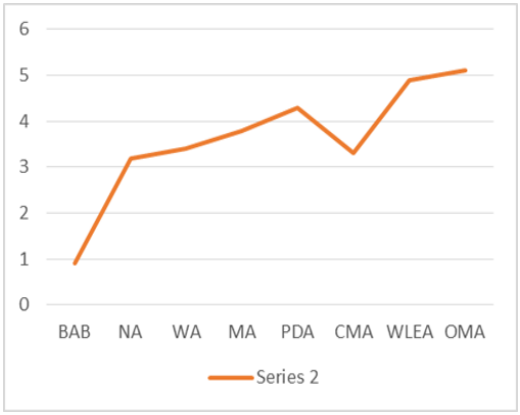

Figure3.after twelve days

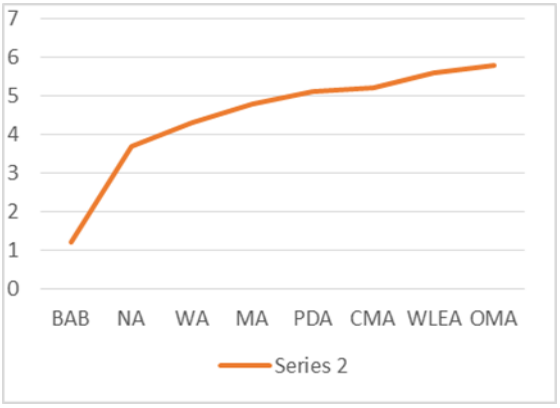

Figure 4. after twenty days

Growth process of G. leptostyla on culture media during different days

Table 1. leptostyla on culture media during different days

Culture medium Property	BAB	MA	NA	PDA	CMA	WA	OMA	WLEA
Growth rate	8	6	7	5	4	7	1	3
Early growth	8	7	6	6	2	4	1	3
Mycelium fungi density	6	4	5	1	9	8	2	7
Colony morphology	Yeast-shaped	Valve	Hill-shape	Valve	fan shape	fan shape	circular	circular

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