Available online at www.ijpab.com

ISSN: 2320 – 7051
Int. J. Pure App. Biosci. **3 (4):** 54-56 (2015)

INTERNATIONAL JOURNAL OF PURE & APPLIED BIOSCIENCE

Short communication

OPEN ACCESS

An "Isolate" that has been found to be remarkable to display "Hostility" against a "fungal pathogen" in the area of "Barak valley", "Assam" (India)

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ABSTRACT

A "bacterial" "isolate" is being drawn out from a tea plant in Southern division of Assam in India, the southern division is more often known as "Barak valley". A "systematic" out come with "isolation" of "bacteria" from "cultivable area "of "tea plant" in that region was achieved. On obtaining the "isolate" from the area of "tea growing places" of this province as said about, its outlined "aspects" were being "emphasized" followed by the "action" against the "fungi" is verified out, finally all those the "outcomes" were put upon. After being "inspected" for its "proficiency" by the "bacterial isolate", it is seen that a "noticeable" "outcome" is attained and that is being listed in this paper.

***Key words**: "Aspects", "cultivable area", "emphasized".*

INTRODUCTION

Preserving crops and growing them in a nice manner is very much needed for the overall running of crop production. As per, Afzal and Bano[1], it is quit understood that "*Rhizobium*" being associated with "non-leguminous" plants have the potentiality for solubilization of "phosphate", could also behave as manufacturer of "hormones" and also could act as "fixater" of Nitrogen"[4]. As it admitted that" *Fusarium oxysporum*" is the agency that brings ill luck in the "production of crops", the effect of it in different crops have been laid several times. Here in this context a "bacterial isolate" is steered for its hostility in opposition to a "fungal strain" and the result therefore was written more lucidly.

MATERIAL AND METHODS

Separation of the "Bacterial isolate" its "Physico-chemical" assessment and "Disconnection" of fungi ("*Fusarium oxysporum*"):

On "YEMA" ("Yeast Extract mannitol agar") medium with the following composition; yeast extract 1g,mannitol 10 g, K_2HPO_4 0.5 g, $MgSO_4.7H_2O$ 0.2 g,NaCl 0.1 g, distilled water 1000 ml, nutrient agar of around 20 g was added to the medium and pH adjusted to 6.5 to 7.0 [2] the required strain of "bacteria" was cut off, further on doing streaking again and again in the "identical medium" "pure colony" was achieved. The "bacterial isolate" was brought from "tea cultivated areas" of Barak Valley, Assam, (India) "from TV 20 ("TV" are Toklai varieties) , once the fungi "*Fusarium oxysporum*" was bought from the "Ecology department" of "Assam University", which was grown in "Martin's agar medium",[6]. Then the "colony morphology" of the fungus was decided with ordinary outcomes by Gilman, 1957. There by acquired

"isolate" was tested against the fungi for "antagonistic" "action". Besides the above facts, the "physico-chemical factors" of the "bacterial isolate" was "divulged".

"Antagonistic" achievement by the bacterial "isolates" against fungi:

The "antagonistic" act of the bacteria against "fungi" was checked by Sakthivel *et al*.[7] of "dual inoculation technique" that was acquired from source[10].

RESULTS OF THE ENTIRE WORK

"Physico- chemical" "trait" of the bacterial isolate:

S.No.	Isolates	Growth at different pHs			Growth at different temperatures				Salt tolerance (NaCl of 1%)
		4	6	8	4^0c	16^0c	20^0c	30^0c	1%
1	Rhi2	-	+	+	–	–	+	++	+

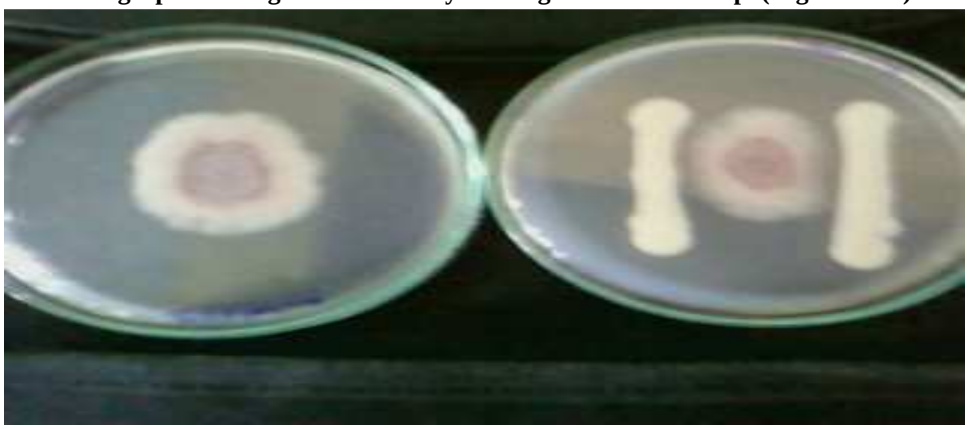
Here it means + as moderate and ++ as good. The isolates were marked as

"Biocontrol" by "bacteria" against "fungi":

S.No.	Isolates	*Fusarium* sp.(ZOI) in cm.
1.	Rhi2	2.1±0.2 cms

("ZOI" stands for Zone of Inhibition in cms).

Photograph of antagonism shown by Rhi2 against *Fusarium* sp. (Right Photo)



DISCUSSION

In the first photo (extreme left) only the concerned "fungi' is showed without the "Bacteria" and in the next one (at right) "fungi" with "bacteria" evident that of "antagonism "The bacterial isolate on that plate seen to be "white" in colour ,1% NaCl was used by it, at 30^0C temperature and at "pH" 6 to 8 a well development was watched out, but at pH 4 and 9 the "growth" outcome" was "pessimistic", as well above 30^0C nothing "growth" was seen, and the "outcomes" were alike to the "outcome" obtained for the *Rhizobium* isolates obtained by Singh *et al*.[8]. "Alike" results was obtained for strains that grew at around 30^0C, being said by Kucuk *et al*.[5] that too was in accord with the results attained for the isolates of *Rhizobium* obtained by Singh *et al*.[8]. Concerning the "biocontrol action" by the isolate against the "fungi" is in "harmony" with the results obtained by Singh *et al*.[9] for "*Rhizobium leguminosorum*" Biovar against "*Fusarium* wilt in chicken pea" also they checked for against the same "fungi" with "arbuscular Mycorrhizal fungi", from that appreciable respond was accomplished.

CONCLUSION

An appreciable conclusion is being drawn from the outcome of the work that even though, "like trial" might been completed for like work for like isolate of bacteria against the fungi "*Fusarium oxysporum*"

across the diverse parts across the globe, but it has been a nice "advancement" in "Barak valley"," Assam (India)",it's been a likable stride.. The "means" would have been a noticeable "stride" regarding" this "antagonism" work.

Acknowledgements

Sincere thanks are conveyed to all the members of the "department of Biotechnology of Assam University" for lending their hand, also to "Ecology department in particular to "Prof.B.K Datta and his research scholars". Modesty is expressed to Dr. Rout of "Ecology department, Assam University". A vast majority of profound thankfulness is rendered to all reference sources, for supplying in with immense facts on the subject. It may be there that similar sort of work might have done in other parts but here in this part this is an interesting move specially with "rhizospheric microbe" showing "antagonistic property" so for that reason I show my homage to P.L.K Tennakoon as that effort gave an design to me to carry on the topic to see for "antagonism" by "microbe" against concerned fungi. With the assistance of digital camera the Photo was taken. Further, i express gratitude towards "Ecology Dept. of Assam University" for their helping hand.

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