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EFFCT OF ENVIRONMENTAL CONDIATION ON GROWTH OF FUSARIUM COERULEUM (LIB) SACC CAUSED DRY ROT OF POTATO

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ABSTRACT:
The temperature plays an important role in the development of a disease, dry rot of potato caused by *Fusarium coeruleum (Lib) Sacc*. It was found that the optimum temperature for growth of pathogen was 25^0C.

Key words: - *Temperature, Dry rot of Potato, Fusarium coeruleum (Lib) Sacc*

INTRODUCTION:

Potato gets infected by *Fusarium coeruleum (Lib)sacc*. Causing tuber dry rot which occurs due to faulty handing, transport and storage (Smith and Swingle, 1904, Chadda, 1994) It is responsible for potato tuber loss to the extent of 50% the main symptoms are shrinkage and drying of the tuber with loss of water. During present investigation. Infected potato tubers of different vaieties i.e. Kufri Chandramukhi, K. Badshah. K. Sinduri and k. Lavkar were collected from market.

K. Chandramukhi showed maximum, K. Badshah and K. Lavkar showed medium and K. Sinduri showed minimum infection of dry rot disease caused by *Fusarium coeruleum* (Lib) sacc. Potato Slices of 75mm diameter and 10 mm thickness were prepared from healthy tubers. On the centre of slice mycelia mat of *Fusarium coeruleum* (Lib) sacc. Was inoculated aseptically and kept for incubation for 8 days and linear growth was measured at 24 hrs. interval. (kareppa and Gangawane, 1992) The plates were kept for incubation at 5^{0}C to 35^{0}C and mycelia growth was observed and recorded as linear growth (mm)

Temperature is an important physical factor for disease development (Saharan and Saharan, 1994, Sood and Sharma, 2000). At 5^{0}C on 8th day of incubation period, 26 mm linear growth of *Fusarium coeruleum* (Lib) sacc. Was recorded. When the temperature raised to 10^{0}C the linear growth of *Fusarium coeruleum* (Lib) sacc. Was 36 mm. At 15^{0}C there was 58 mm linear growth. While at 25^{0}C there was highest i.e. 75 mm linear growth. At 25^{0}C there was highest i.e. 75 mm linear growth. At 20^{0}C on 8th day of incubation 65 mm linear growth of *Fusarium coeruleum* (Lib) sacc. was reported. At 30^{0}C, linear growth was decreased to 47.66mm, while at 30^{0}C, there was remarkable decrease in linear growth to 40.33 mm. From the above result, it is clear that there was variation in linear growth of *Fusarium coeruleum* (Lib) sacc. With decrease in temperature. The optimum temperature for Growth of *Fusarium coeruleum* (Lib) sacc. Was25^{0}C.

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Table 1 : Effect of Elvirnomental Condiaton i.e. Temperature on liner growth of *Fusarium coeruleum (Lib) sacc.*

Temperature (^{0}C)	Linear growth (mm) Incubation period (days)							
	1	2	3	4	5	6	7	8
05	..	..	05.33	08.33	12.66	17.00	23.33	26.00
10	05.66	06.00	07.66	11.00	16.33	20.66	27.33	36.66
15	10.66	11.33	17.00	26.66	33.33	41.00	50.00	58.66
20	12.33	14.00	22.66	30.33	37.00	47.66	56.66	65.00
25	13.66	21.33	32.00	41.66	49.33	58.66	67.33	75.00
30	07.00	11.66	18.33	23.00	29.00	35.33	42.00	47.66
35	05.33	09.00	16.66	21.33	27.66	30.33	36.00	40.33
Room Temperature								
(27±2^{0}C)	15.33	23.26	33.33	45.66	53.33	60.33	68.66	75.00
S.E.	00.38	00.64	01.14	01.54	01.66	01.99	02.18	02.35