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RESEARCH ARTICLE

Seed mycoflora of rajmash [*Phaseolus vulgaris* (L.)] in relation to different coloured seed coat

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SUMMARY

Rajmash, the principal legume of population and is also the residence of several seed borne pathogen. Many fungal species affect on the quality and reduce the quantity of seed usable by the forming community after storage. Seed samples of different cultivars of rajmash having different seed coat colour, collected from framers and seed stores were subjected to incubation by using standard blotter and agar plate method for observing of mycoflora. Significant variation in the mycoflora was recorded on different colored seeds. Dark coloured varieties (black maroon. purple) harbored less mycoflora as compared to white and brown coloured varieties. Both field and storage fungi were recorded on unsterilized samples, however, surface sterilized seed samples possessed only pathogenic fungi. Role of seed coat colour in development of mycoflora may be attributed to specific inhibitors and certain phenolic compounds in the seed coats.

Key Words : Mycoflora, Rajmash

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French bean or rajmash *(Phaseolus vagaris* L.) belong to family leguminoceae and also knows as common bean, kidney bean, dwarf bean, navy bean, dry bean and snap bean, string bean, garden bean, and edible bean in different part of India. It is most commonly grown bean and can be consumed as vegetable when pod are immature or as dry pulse after maturity. Its important legume are characterized by the high protein content (22.9%) and nutritive value of their seed. In addition to the root possessing nodules containing rizobia *(Rhizobium paseoli)* that are capable of fixing nitrogen. French bean also cultivated for green managing and erosion control through out the world.

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The primary centre of origin of French bean is South Mexico and Central America. In India French bean growing states are J& K, H.P., Uttarakhand, U.P. and Bihar. In Jammu & Kashmir, Rajmash one of main *Kharif* season crops but some new genotype has been grown in *Rabi* season too.

Rajmash are grown winter crop in plains, while it can be grown all through the year except winter, in hills. It cannot withstand drought as well as very near rainfall and frost. Even though, many of the cultivars are photo-insensitive, certain cultivar develops floral buds only during short days but would abscise during long days. For best growth and yield, the optimum soil temperature is 25-30^{0}C. For pole types the maximum and minimum temperatures for seed germination and growth are 25^{0}C, and 18-20^{0}C, respectively, while the temperatures below 13-14^{0}C (minimum) and above 25^{0}C (maximum) are limiting. However, in mid-hills of North-Eastern region, particularly in Meghalaya, pole beans are grown from March through December when highest summer temperature reaches up to 32^{0}C.

Seed mycoflora are carried either on the surface of with in itself. Different microorganism colonizes the rajmash (seed) during maturation, harvesting and storage. (Christensen and Kaufmann, 1955 and Neergaard, 1977). Role of infected seeds