



Study of effect of different physical parameters on seeds of *Trigonella foenum* and *Spinacea oleracea*

• Ankita Singh • Aishwarya • Nikita Kumari
• Pinky Prasad

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Corresponding Author : Pinky Prasad

Abstract: *The present investigation was aimed at studying the effect of different physical parameters that included normal and hot water treatment under dark and light conditions on growth of Trigonella foenum and Spinacea oleracea. Different growth parameters like Germination (%), Plant height, Seedling Vigour Index, Shoot length, Root length, Day of emergence of first leaf, Total number of leaves and Plant Biomass were investigated. It was concluded that hot water and dark condition best suited for cultivation of Trigonella foenum while normal water and dark condition favoured cultivation of Spinacea oleracea.*

Keywords : *Trigonella foenum, Spinacca oleracea, Physical parameters, Seedling Vigour Index.*

Ankita Singh
B.Sc. III year, Botany (Hons.),
Session : 2017-2020, Patna Women's College,
Patna University, Patna, Bihar, India

Aishwarya
B.Sc. III year, Botany (Hons.),
Session : 2017-2020, Patna Women's College,
Patna University, Patna, Bihar, India

Nikita Kumari
B.Sc. III year, Botany (Hons.),
Session : 2017-2020, Patna Women's College,
Patna University, Patna, Bihar, India

Pinky Prasad
Head, Department of Botany, Patna Women's College,
Bailey Road, Patna-800 001, Bihar, India
E-mail : dr.pinky.prasad@gmail.com

Introduction :

Germination is the process of emergence of radical and plumule of seed embryo resulting in the formation of a seedling. All the viable seeds which have overcome dormancy (if any) either naturally or artificially will actively germinate under suitable environmental conditions necessary for seed germination i.e., water, oxygen, temperature and in some cases light. Such seeds which just wait for suitable environmental conditions to germinate are said to be 'quiescent'. The process of germination starts when water is imbibed by the seed. This initiates several biochemical process required for the seedling development. Germination is considered to be complete when the radical that forms the primary root breaks the coleorhiza that is the root sheath and emerges from the seed to form the seedling (Siegel and Rosen, 1962).

There are various factors on which the rate of germination depends. Different plants require different conditions for successful and faster germination which depends on various ecological factors such as availability of air and water, optimum range of temperature, light or darkness etc.