



## RESEARCH PAPER

# Studies on preventing *in-situ* germinating in groundnut (*Arachis hypogaea* L.) VRI 8

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**Abstract :** Groundnut (*Arachis hypogaea* L.) is one of the most commercially important oilseed crops and it is also designated as a “Wonder Legume”. Dormancy play a major role in deciding crop yield in groundnut. Generally, the bunch type groundnut varieties are non-dormant while, spreading and semi spreading types are having a varied period of dormancy. The receipt of rain at the time of harvest in non dormant varieties adversely affects the considerable yield loss due to *in situ* germination (sprouting). The groundnut VRI 8 is a non dormant bunch variety and popular among the farmer in Northern districts of Tamil Nadu. In order to over come *in situ* germination in VRI 8 groundnut variety, foliar application of ABA at various concentrations *viz.*, 250 and 500 ppm were tried at 70 and 80 days after sowing. The results revealed that foliar spray of Absciscic acid (ABA) 500 ppm at 70 days after sowing (DAS) in non-dormant groundnut cv. VRI 8 could induced dormancy and minimized the *in situ* germination even irrigation given at 90 DAS. The practical utility of the study is foliar application of ABA 500 ppm at 70 DAS can minimize yield loss by preventing *in situ* germination even receipt of rain at 90 DAS. For immediate sowing, kernel seed dormancy could easily broken by soaking the seeds with Ethrel 100 ppm for 6 hours which helps the farmer for taking immediate sowing without missing the cropping season.

**Key Words :** Groundnut, *In situ* germination, Absciscic acid, Dormancy, Ethrel

**View Point Article :** Parameswari, K., Vijayageetha, V. and Vijayan, R. (2024). Studies on preventing *in-situ* germinating in groundnut (*Arachis hypogaea* L.) VRI 8. *Internat. J. agric. Sci.*, 20 (RAAEALSSES) : 20-25, DOI:10.15740/HAS/IJAS/20/RAAEALSSES-2024/20-25. Copyright@2024: Hind Agri-Horticultural Society.

**Article History :** Received : 15.10.2024; Accepted : 25.10.2024

## INTRODUCTION

Groundnut (*Arachis hypogaea* L.) is a leguminous plant which is widely cultivated in the tropics and subtropics between 40°N and 40°S latitudes. It is recognized for its high-oil content and edible seeds and it is the fourth most important source of edible oil and a third most important source of vegetable protein in the World. Groundnut is not only an important oilseed crop of India but also an important agricultural export oriented

commodity. Globally, groundnut covers 327 lakh hectares with the production of 539 lakh tonnes with the productivity of 1648 kg per hectare (FAOSTAT, 2021). India is one among the top three producing countries of groundnut and it ranks second next to China (34 per cent contribution to the world groundnut production). Nearly, 19 percent of world groundnut production is contributed by India during 2021. With annual all-season coverage of 54.2 lakh hectares, globally, India ranks first in groundnut

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