

**PPVII. 6. Influence of chemical priming on the growth of
Zingiber officinale Rosc.**

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From ancient times the medicinal property of ginger has been exploited against various diseases. Seed priming is a better and cost-effective method to improve the productivity of crops. In the present research work, the effects of different concentrations of two chemical priming agents (NaCl and KH_2PO_4) along with the varied duration of priming on the growth of ginger were investigated. Four ginger varieties namely Athira, Karthika, IISR Mahima, and IISR Varada were used for the current study. For NaCl priming, the seed rhizomes were immersed in different concentrations of NaCl (50 mM, 100 mM, 250 mM, and 500 mM) for different time durations (6 hr, 12 hr, 18 hr, and 24 hr). The primed rhizomes were allowed to grow in grow bags along with control rhizomes. Primed plants showed the fastest germination than the unprimed. Primed ginger showed sprouting after 7- 10 days, but the control rhizomes took more than 15 days to sprout. Rhizomes primed for 24 hr in 50 mM NaCl showed the highest growth rate with a shoot length of 56.7 cm, leaf length of 21.33 cm, and leaf breadth of 2.6 cm. Also, it showed more chlorophyll content too. While the plants primed with KH_2PO_4 (25Mm, 50Mm, 75Mm, and 100 mM) showed less growth in terms of shoot length and leaf length, but they were found to be devoid of a viral foliar disease. In the present research work, both the priming agents produced better results after priming. NaCl was found to be the better priming agent which enhanced the growth but KH_2PO_4 was found to be effective in disease management.