

# **On-farm priming, a key technology to enhance the chickpea production of Rain-fed areas of Pakistan**

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## **Abstract**

Chickpea (*Cicer arietinum* L.) is a vital source of protein for human intake and animal forage. In Pakistan, 71% of the total area used for pulse crops is dedicated to the production of chickpeas, and 88% of this land is farmed using rain-fed techniques. However, chickpea production is declining during the past few years. This drop in chickpea production is concerning because it is a crucial part of Pakistan's poor people's diet. Since this production cannot meet the nation's demand for chickpeas, there is a great need to make up for this loss. Poor stand establishment, which has a big impact on crop production, is one of the main problems in semi-arid areas. Similarly, it is challenging to produce a high yield without a sufficient number of healthy plants that are spaced properly. Poor germination is also a common issue for farmers, which delays sowing and raises labor costs. In these circumstances, on-farm priming is a simple and inexpensive technology to enhance germination and seedling vigour, resulting in better crop performance under both normal and stressful conditions and ensuring a higher yield. On-farm priming is a simple technique that involves soaking the seed overnight in freshwater (5:1) and drying it out in the shade. Multiple research investigations on seed priming demonstrate a 50–100% increase in yield. For the best outcomes, it is advised to sow primed chickpea seeds, which can result in high yields despite adverse conditions.

**Key Words:** Chickpea, Poor germination, Seed priming, poor's diet