

True shallot (*allium cepa* var *ascalonicum*) seed production during off season

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20513750&lokasi=lokal>

Abstrak

Seed cultivation for true shallot is an alternative for the more common cultivation practice in which 30% of the harvested tubers are used for cultivation purposes. Seed production of this temperate tuber in the tropical region, however, is quite challenging due to its low flowers and seed formation. Several studies have shown that vernalization (cold induction) and application of Benzil Amino Purin (BAP) had improved the flowering and seed production of shallot. However, such studies were conducted during the best cultivation period for about 3 months and thus, limit the production period of seeds during the rainy season. This study was conducted to observe the effect of both methods outside cultivation periods on the flower and capsule numbers, fruit set, and weight of 100 seeds when compared with commonly practiced cultivation during the dry season. The onion bulbs vernalized at 10 oC for 30 days were subjected to synthetic hormone (BAP) prior to planting. The shallot group treated with BAP had the lowest values for all observed parameters, i.e., 1,552.67 number of flowers; 312.11 number of capsules; 22.5% seed set; and 0.2244 g weight of 100 seeds, compared to those in the vernalization treated group, i.e., 1,592.44 number of flowers; 623 number of capsules; 30.5% seed set; 0.2261 g weight of 100 seeds and control group 6,774.67 number of flowers; 3,898.44 number of capsules; 57.06% seed set; 0.3304 g weight of 100 seeds. In conclusion, the commonly practiced cultivation of sowing bulbs directly without vernalization and plant growth regulator treatment is probably the better method to produce shallot seeds during the offseason, the rainy season.