

Kullapak Soumnam 2007: Seed Development and Fermented Times on Seed Quality of Ceylon Spinach (*Basella* sp.). Master of Science (Agriculture), Major Field: Horticulture Department of Horticulture. Thesis Advisor: Assistant Professor Sutevee Sukprakarn, Ph.D. 45 pages.

Seed development of Ceylon spinach accessions BA019 (green stem) and BA011 (red stem) was studied at Tropical Vegetable Research Center, Kasetsart university, Kamphaengsaen campus to determine the quality of seed when planted in December 2003 and November 2004. Seeds of Ceylon spinach which were grown in December 2003 reached their physiological maturity at 35 days after anthesis (DAA) in BA019 and 45 DAA in BA011. Seed started to germinate at 25 and 20 DAA in BA019 (13.5%) and BA011 (1.5%) respectively and reached their maximum at 40-50 DAA (95.5%) and 35-50 DAA (91.12%) of germination in BA019 and BA011 respectively.

Seeds were then harvested at 35, 40, 45, 50 and 55 DAA from plant which were grown in November 2004, found the optimal harvested time from 45 to 55 DAA with highest germination percentages and germination index or when the fruits were dark purple. Moreover, seeds of BA019 were extracted by natural fermented for 24, 48 or 72 hours compared to non-fermented and found no differences in seed quality after 6 months kept at room temperature but the highest germination index was obtained in seeds fermented for 48 hours.

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6 / 3 / 07