

INVESTIGATION ON THE POSSIBILITY OF RAPID PROPAGATION OF POTATO (SOLANUM TUBEROSUM) USING STEM, SPROUT AND SINGLE-NODE CUTTINGS

Kh.Parvizi and M.Khosh-Khui

**Faculty Member, Hamedan Agricultural Research, Department of Plant Breeding,
Professor of Horticultural Department, Shiraz University**

Rapid propagation of potato by stem, sprout and single-node cutting is used in the many research program for production of certified seed potato free from non-systemic micro organisms. This research was conducted in two successive years (1997 & 1998) in the green house of the Department of Horticulture, College of Agriculture, Shiraz University, All treatments were conducted in a completely randomized design with a factorial arrangement having four replications. Tubers of three cultivars, namely 'Marfona', 'Moren' and 'picaso' were used in this investigation.

In stem cutting propagation method, when the stock plants reached to 30-40 cm, the shoots were pinched to stimulate the development of buds in leaf axis. Then stem cuttings were harvested.

In sprout cuttings, tubers of three potato cultivars were soaked in 5mg l⁻¹ GA3 solution for 5 minutes and then were exposed to 15 to 20°C temperature and 80 to 85% relative humidity under indirect light. After 2 to 3 weeks, main and side-bud growths were completed and prepared for sprout cutting, each containing 2 or 3 nodes.

In single-node cutting, when the shoot of stock plants reached to 4 to 5 leaves they were cut, so that, each leaf with its axis bud formed one single-node cutting. In all three methods,