

**Effect of storage period of bulbs on vigour, growth and yield of red onion**  
**(*Allium ascolanicum*)**

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**Abstract:** Availability of quality planting materials of red onion (*Allium ascolanicum*) is a major problem for the onion farmers in Jaffna. Onion bulb vigour varies with storage period and the optimum storage period of planting bulb has crucial role on the growth, development and yield. Considering these facts and experiment was conducted at the Agricultural Research Station, Thirunelvely, Jaffna during *Maha*, 2007/2008 to evaluate the growth and yield of red onion variety Vethalam. Five different period of storage was given as treatment and the treatments are 30(T<sub>1</sub>), 40(T<sub>2</sub>), 50(T<sub>3</sub>), 60(T<sub>4</sub>) and 70(T<sub>5</sub>) days stored bulbs from harvest. The experiment was conducted in Randomized Complete Block Design with five replicates. After the respective storage period the bulbs were planted in the field at recommended spacing and agronomic practices were adapted based on department of Agriculture recommendations. Germination percentages, leaf, root growth and final bulb yields were recorded and analyzed. Results showed that 60, and 70 days stored planting bulbs gave significantly higher leaf and root growth and bulb yield than the other treatments tested. Plants from 60 days stored bulbs (T<sub>4</sub>) plants had the highest vigour than other treatments. The different between T<sub>4</sub> (60 days) and T<sub>5</sub> (70 days) is mainly due to the sprouting of bulbs before planting. The poor vigour and germination percentages in T<sub>1</sub> (30 days), T<sub>2</sub> (40 days) and T<sub>3</sub> (40days) may be due to the seed bulb dormancy. From this study it can be suggested that Jaffna farmer can store onion bulb up to 70 days before planting to get vigorous plant growth and optimum yield.