B-96 Effect of geographical locations on storage life of onion

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Big onion *(Allium cepa* L) is an essential item in any Sri Lankan diet. The total annual requirement is around 90,000 metric tons of which about 50% is imported every year despite the good potential to produce them locally.

Seaonality of production and short shelf life of the produce are major bottlenecks to increase the availability of locally produced onions within the country. Therefore, it is important to identify means of increasing the shelf life of local onion in order to extend its availability. Among many factors that affect the shelf life of big onion relative humidity and ambient temperature are considered important.

An experiment was conducted to identify the effect of temperature and relative humidity on the shelf life of big onion. Different geographical locations were used for the experiment in order to test the storability under different temperature (T°) and relative humidity (RH). Results revealed that the shelf life of big onion in locations such as Sita Eliya, Rahangala, and Bandarawela where average minimum temperature is less than 15°C are relatively lower than that of Maha Illuppallama and Homagama where average minumum temperature is 23 - 28°C. Relative humidity in all locations (60 - 90%) was favourable for high sprouting losses. Spraying with a sprouting inhibitor before the maturity stage, helped to reduce losses due to sprouting up to 65% depending on the condition of the storage environment. However, the comparative advantage of using sprouting inhibitor was low in low temperature locations where average minumum temperature was below 15°C. Results indicated that average minimum temperature and relative humidity conditions at low country locations such as Homagama and Maha Illuppallama (T° 23 - 28°C and Rh < 80%) are more suitable than those of mid and up country locations tested for long term (>3 months) storage of big onion.

Financial assistance by CARP (Research grant 12/27/20) is acknowledged.