

Effect of Seasons and Storage Methods on Seed Quality of Slender Leaf (*Crotalaria Sp.*) in Western Kenya

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Abstract : Slender leaf (*Crotalaria brevidens* and *Crotalaria ochroleuca*), African indigenous vegetables, are an important source of nutrients, income and traditional medicines in Kenya. However, their production is constrained by poor quality seed, due to lack of standardized agronomic and storage practices. Factors that affect the quality of seed in storage include the duration of storage, seed moisture, temperature, relative humidity, oxygen pressure during storage, diseases, and pests. These factors vary with the type of storage method used. The aim of the study was to investigate the effect of various storage methods on seed quality of slender leaf and recommend the best methods of seed storage to the farmers in Western Kenya. Seeds from various morphotypes of slender leaf that had high germination percentage (90%) were stored in pots, jars, brown paper bags and polythene bags in Kakamega and Siaya. Other seeds were also stored in a freezer at the University of Eldoret. In Kakamega County average room temperature was 23°C and relative humidity was 85% during the storage period of May to July 2006. Between December and February 2006 the average room temperature was 26°C while relative humidity was 80% in the same county. In Siaya County, the average room temperature was 25°C and relative humidity was 80% during storage period of May to July 2006. In the same county, the average temperature was 28°C and relative humidity 65% during the period of December and February 2006. Storage duration was 90 days for each season. Seed viability and vigour, was determined for each storage method. Data obtained from storage experiments was subjected to ANOVA and T-tests using Statistical Analysis Software (SAS). Season of growth and storage methods significantly influenced seed quality in Kakamega and Siaya counties. Seeds from the long rains season had higher seed quality than those grown during the short rains season. Generally, seeds stored in pots, brown paper bags, jars and freezer had higher seed quality than those stored in polythene bags. It was concluded that in order to obtain high-quality seeds farmers should store slender leaf seeds in pots or brown paper bags or plastic jars or freezer.

Keywords : *Crotalaria* sp, seed, quality, storage

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