



RESEARCH ARTICLE

# Effect of botanicals on storability of sweet corn (*Zea mays* L. *Saccharum*) seeds

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## ABSTRACT

An experiment was conducted at Main Agricultural Research Station, University of Agricultural Sciences, Dharwad during *khariif 2008*, to find out to enhance storability of sweet corn seeds through use of botanicals treatment. The storage studies revealed that seeds treated with sweet flag rhizome powder @ 10 g per kg of seeds had recorded higher germination (87.3 %), dry weight of seedlings (2.01g), vigour index (2864) and less infestation (3.60 %) at the end of 10 months of storage.

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## INTRODUCTION

Maize (*Zea mays* L.) is the world's third leading cereal crop after wheat and rice. It is one of the most widely grown cereals in the world and has great significance as human food, animal feed and raw material for large number of industrial products.

Sweet corn is an American crop. It cannot be regarded as a staple food but it is consumed fresh as confection. The cultivation of sweet corn almost dates back to the discovery of America by Columbus. Although records are meagre, there is good evidence that sweet corn was known and used by Indians of both North and South America.

Storage of seed till next sowing season is an essential part of seed industry. In general, cereals are most susceptible to storage pests and sweet corn is no exception. Because of its high protein content in sweet corn, seed is attacked by storage pests and other microflora. The rice weevil (*Sitophilus oryzae*) in storage causes considerable damage to the seed

and deteriorates the quality of seed. Apart from this, fungi associated with stored seeds are chiefly responsible for deterioration of seed quality. In order to prevent the quantitative and qualitative losses due to storage pests and diseases. Several methods such as storage in safe conditions and containers with safe moisture levels and seed treatment with suitable chemicals or plant products etc. are being adopted.

An era of synthetic chemicals came with several insecticide and fungicide which successfully manage the infestation caused by insects, fungi and other microflora. But, the descriptive use of chemicals and their residual toxicity, adversely affect the non-target animals including human beings besides affecting the seed quality. Hence, the safe and feasible approach is the treatment of seeds with botanicals which are safe, eco-friendly, economical and easily available. It has been proved beyond doubt that, mixing of seeds with oils prevents the multiplication of beetles in cereals because of their repellent property and also smoothen the seed surface