THE ROLE OF MITOCHONDRIA IN DETERIORATION OF SOYBEAN SEEDS. (C04-sekharan083947-Poster)

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Abstract:

The use of seeds with high genetic and physiological quality is an important pre-requisite. The physiological quality depends on the longevity of seeds in storage. Soybean seeds do not store well with time. The aging and seed deterioration in several grains and oilseeds have been associated with chromosome aberrations and changes in RNA synthesis, in proteins and enzymes. The objective of the study is to consider aging as an effect of mitochondrial deterioration in the different parts of the seed - the rich storage reserves of the cotyledon and the embryonic axis that eventually grows into a seedling. It could explain the role of oxidant stress in mitochondria during aging of seeds and be a novel approach to understand aging mechanisms of seed. The objectives are to study seed aging in storage a) emphasizing the morphological and enzymatic changes in the embryonic axis and cotyledons b) the antioxidant quantity and activity c) the detection of free radical products and d) the effect on mitochondrial DNA. Preliminary studies indicate differences in the antioxidant capacity of enzymes, and peroxidation products in various tissues of the seed.

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