

Effect of Gama Ray in Fruit Crops

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ARTICLE ID: 107

Abstract

Plant breeders have been used new techniques like as genetic engineering and mutation breeding to reduce the genetic bottle-neck problem. Mutation breeding technique mostly used for physical mutagens.

Introduction

Gamma rays most widely used physical mutagens and play an important role on this application spreading. The application of gamma ray mostly used to develop new species. Gamma rays are not threat for Humankind and environment and they give result easily.

Some strong reasons to use this technique

- Safe for human and environment
- Supportive method for classical breeding
- Being available for several plant species
- Ready for mutual use with other mutation techniques and modern technologies
- Genetically modified organism not transferring any foreign, new genes from outside

Some Improved Fruits Features by Gamma Ray Application

Fruit crops	Mutant Traits
Apple	Compact tree, Early maturing, Red fruit skin colour, Dwarf, Variegated leaf
Apricot	Earliness
Banana	Bunch size, Earliness, Reduced Height, Resistant to black sigtoka disease
Citrus	Seedless, red colour fruit and juice, Xanthomonas citri disease resistant, resistant to Tristeza virus
Date palm	Bayoud disease resistance
Guava	Cluster fruiting, cylindrical fruit shape, low seeded fruits, Seed less, segmented fruits
Indian Jujube	Earliness, Fruit morphology
Jujube	Fruit shape and leaf shape, size variation

Japanese pear	Black spot disease resistance
Loquat	Fruit size
Mulberry	High rooting ability
Papaya	Short, striated fruits, Split stem, malformed top disease resistance
Pomegranate	Dwarf
Plum	Early Flowering
Pear	Disease Resistance
Peach	Fruit size and yield, Disease Resistance
Pineapple	Drought tolerant producing unmarketable fruits, Spineless,
Strawberry	Small and thick leaf, Light leaf colour, White flesh and long fruit; Phytophthora cactorum resistance

