

1. Record Nr.	UNINA9910132842203321
Titolo	Induced mutation in tropical fruit trees
Pubbl/distr/stampa	[Place of publication not identified], : International Atomic Energy Agency, 2009
ISBN	1-282-77519-7 9786612775192
Edizione	[1st ed.]
Descrizione fisica	1 online resource (170 pages)
Soggetti	Mutation breeding Tropical fruit
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Cover -- FOREWORD -- PREFACE -- CONTENTS -- SUMMARY -- REFERENCES -- CHAPTER I In vitro induced mutation techniques applied to improve some major tropical fruit trees -- Recovery of mango plants with antrachnose resistance following mutation induction and selection in vitro with the culture filtrate of Colletotrichum gloeosporoides Penz -- 1. Introduction -- 2. Materials and methods -- 2.1. Establishment of embryogenic cultures -- 2.2. Irradiation of embryogenic cultures and determination of LD50 -- 2.3. In vitro selection with C. gloeosporioides culture filtrate -- 2.4. Somatic embryo development -- 2.5. Plant regeneration -- 3. Results -- 3.1. Embryogenic responses of mango cultivars -- 4. Discussion and conclusions -- ACKNOWLEDGEMENTS -- REFERENCES -- BIBLIOGRAPHY -- Radiosensitivity and in vitro studies of Citrus suhuiensis -- 1. Introduction -- 2. Materials and methods -- 2.1. Radiosensitivity -- 2.2. In vitro micropropagation -- 3. Results and discussion -- 3.1. Radiosensitivity -- 3.2. Citrus organo genesis in vitro -- 4. Conclusion -- REFERENCES -- Development of seedless fruits mutants in citrus including tangerine(C. reticulata) and pummelo (C. grandis) through induced mutations and biotechnology -- 1. Introduction -- 2. Material and methods -- 2.1. In vitro gamma irradiation induced mutation techniques -- 2.2. Mutation induction with gamma irradiation of grafted scions -- 3. Results and discussion -- 3.1. Germination -- 3.2. Radiation induced mutation -- 4.

Conclusions -- REFERENCES -- Mutation induction for improving of tangerine in Iran -- 1. Introduction -- 2. National production -- 3. Materials and methods -- 3.1. Shoot- tip grafting -- 3.2. Grafting -- 3.3. In vitro mutation induction -- 4. Results and discussion -- REFERENCES.

Somatic embryogenesis and embryo culture coupled with gamma irradiation for generating avocado (*Persea americana* Miller) mutants in the Philippines -- 1. Introduction -- 2. Materials and methods -- 2.1. Plant materials and preparation of explants -- 2.2. Culture media and incubation -- 2.3. Induction of somatic embryogenesis from embryogenic cultures -- 2.4. Plant regeneration from somatic embryos -- 2.5. Embryo culture and direct shoot regeneration from lateral buds of germinating zygotic embryos -- 2.6. Gamma irradiation of embryo and embryogenic cultures -- 2.7. Micropropagation and micrografting of somatic embryo-derived shoot regenerants -- 2.8. Statistical analyses -- 2.9. Genetic analysis among avocado mother plants and regenerants by SSR -- 3. Results and discussions -- 3.1. Shoot regeneration from embryo cultures of avocado and subsequent micropropagation -- 3.2. Improved plant regeneration in avocado by somatic embryogenesis -- 3.3. Effects of gamma irradiation on avocado tissue cultures -- 3.4. Genetic analysis using molecular markers -- ACKNOWLEDGEMENTS -- REFERENCES --

Combining zygotic embryo culture and mutation induction to improve salinity tolerance in avocado (*Persea americana* Mill) -- 1. Introduction -- 2. Materials and methods -- 2.1. Zygotic embryo culture -- 2.2. Radiosensitivity curves -- 2.3. Salt toxicity curves in rootstock -- 2.4. Establishment of in vitro selective methods and gene bank development -- 3. Results and discussion -- 3.1. Zygotic embryo culture -- 3.2. Radiosensitivity curves of mature zygotic embryos -- 3.3. Salt toxicity curves in rootstock -- 3.4. Combining mutagenic and selective saline doses in the same approach -- 4. Conclusions --

ACKNOWLEDGEMENTS -- REFERENCES -- Regeneration from irradiated avocado (*Persea americana* Mill.)embryogenic cultures -- 1. Introduction -- 2. Materials and methods.

2.1. Embryogenic avocado cultures from the highlands -- 2.2. Irradiation of embryogenic cultures -- 2.3. Somatic embryo development -- 2.4. Somatic Embryo Germination -- 2.5. Plantlet Regeneration -- 3. Results and discussion -- 3.1. Induction and maintenance of embryogenic avocado cultures -- 3.2. Somatic embryo development from irradiated and non-irradiated cultures -- 3.3. Somatic embryo enlargement and germination -- 3.4. Plantlet recovery -- 4. Conclusion -- REFERENCES --

CHAPTER II Improvement of exotic tropical fruit trees through radiation induced mutation -- Radiation-induced mutation breeding of papaya -- 1. Introduction -- 2. Materials and methods -- 2.1. Radiosensitivity tests -- 2.2. Mass irradiation of Eksotika seeds -- 2.3. Evaluation of M2 and M3 populations -- 2.4. Screening M2 seedlings for PRSV tolerance -- 3. Results and discussion -- 3.1. Radiosensitivity tests -- 3.2. Evaluation of M2 and M3 populations -- 3.3. Screening M3 seedlings for PRSV tolerance -- 4. Conclusions --

ACKNOWLEDGEMENTS -- REFERENCES -- Guava (*Psidium guajava* L) improvement using in vivo and in vitro inducedmutagenesis -- 1. Introduction -- 2. Materials and methods -- 2.1. In vitro mutagenesis -- 2.2. In vivo mutagenesis -- 3. Results and discussion -- 3.1. In vitro mutagenesis -- 3.2. In vivo mutagenesis -- ACKNOWLEDGEMENTS -- REFERENCES -- Induction of mutation in Jujube *Zizyphus jujuba* Mill using tissue culture combined with <sup>60</sup>Co - RAY irradiation -- 1. Introduction -- 2. Materials and methods -- 2.1. In vivo radiation -- 2.2. In vitro irradiation -- 3. Results and discussion

-- 3.1. In vivo irradiation -- 3.2. In vitro irradiation -- 4. Discussion and conclusions -- REFERENCES -- Mutation breeding in South Africa 2003-2004 -- 1. Introduction -- 2. Materials and methods -- 2.1. Citrus varieties -- 2.2. Litchi varieties -- 2.3. Guava varieties. 2.4. Mutation breeding on alternatives crops -- 3. Results and discussion -- 3.1. Citrus -- 3.2. Guava -- 3.3. Other species -- 4. Conclusions -- REFERENCES -- CHAPTER III "Technology packages" for crop improvement using mutation induction and biotechnology -- "Technology packages" for crop improvement using mutation induction and biotechnology -- 1. Introduction -- 2. Genomes and DNA markers -- 3. Assessment of genetic variation -- 3.1. Assessment of chromosomal variation and genomes by cytogenetics -- 3.2. Assessment of sequence variation - DNA markers -- 3.3. Applications of DNA markers -- 4. Assessment of patterns of gene expression -- 4.1. Assessment of DNA methylation patterns -- 4.2. Molecular technologies applied for the understanding of biological systems -- 4.3. Assessment of patterns of gene expression -- Summary -- REFERENCES -- LIST OF PARTICIPANTS.

---

Sommario/riassunto

This publication is based on an FAO/IAEA coordinated research project (CRP) and provides insight into the application of induced mutation and in vitro techniques for the improvement of well known fruit trees such as citrus, mango, avocado and papaya, as well as more exotic fruit trees such as litchi, annona, jujube, carambola, pitanga and jaboticaba. The latter are of particular importance due to their adaptation to harsh environments and their high potential as basic food and micronutrient providers for populations in poorer and more remote regions. The findings of the CRP show that application of radiation induced mutation techniques in tropical and subtropical fruit trees can contribute to improving nutritional balance food security, and to enhancing the economic status of growers.

---

2. Record Nr.	UNINA9911046023903321
Titolo	Nurse Educators and Practitioners Journal
Pubbl/distr/stampa	Philippines : , : Nurse Educators and Practitioners Guild, Inc.
ISSN	3116-2118
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico