

# Certificate of Attendance

This is to certify that

**Made Ria Defiani**

has participated as **Presenter** at

**INTERNATIONAL SYMPOSIUM ON HORTICULTURE 2018**  
held on

November 27 - 30, 2018 at  
the Anvaya Beach Hotel Kuta - Bali, Indonesia

  
**Dr. Hardiyanto, M.Sc**

Director of ICHORD

**ISH**  
2018

*Emerging Challenges and Opportunities  
in Horticulture Supporting Sustainable  
Development Go*





# BOOK OF ABSTRACT

*Emerging Challenges and Opportunities  
in Horticulture Supporting Sustainable  
Development Goals*



**iSH 2018**

**INTERNATIONAL  
SYMPOSIUM ON  
HORTICULTURE**

November 27-30, 2018

*Kuta, Bali, Indonesia*

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MADE RIA DEFIANI  
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Celebrating the World with Ornamental Plant Innovations for Prosperity				
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		Novel methods for creation of compact <i>Kalanchoe blossfeldiana</i> potted plants	Margrethe Serek	
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		Postharvest Characteristics of Torch Ginger ( <i>Etilingera elatior</i> ) Inflorescence at Two Developmental Stages	Choon Sea Yeat and Phebe Ding	90
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		Effect of Aqua Pack with Holding Solutions on Quality and Vaselife of Gerbera ( <i>Gerbera jamesonii</i> ) Cv. Dana Ellen	Padmanaban Jayachandran, Ramesh Kumar Srinivasan, Murugan Subramania Pillai and Dhiviya Bharathi	91
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		Increasing Genetic Diversity and Phenotype Response of In Vitro Torbangun ( <i>Coleus amboinicus</i> Lour.) Through Gamma-Ray Irradiation	Rusmiyati, Henny; Iis Aisyah, Syarifah; Sukma, Dewi; Damanik, Rizal	93
		Trends of ornamental plants offer by nursery shops around Denpasar, Bali	Defiani, Made Ria	93
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## ORAL

# Increasing Genetic Diversity and Phenotype Response of In Vitro Torbangun (*Coleus amboinicus* Lour.) Through Gamma-Ray Irradiation

Henny Rusmiyati<sup>1)</sup>, Syarifah Iis Aisyah<sup>2)</sup>, Dewi Sukma<sup>3)</sup>, Rizal Damanik<sup>4)</sup>

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**Abstract.** The diversity of Indonesian *Coleus amboinicus* L. species is on development. These species were called as Torbangun plant by the Batak tribe in Indonesia. It has been known to help to stimulate breast milk production. The purpose of this study was to improve the genetic diversity of Torbangun through gamma-ray irradiation. Moreover, to identify the genetic diversity and phenotype response of Torbangun plantlets mutant. This study used a complete factor Randomized Block Design (RCBD) with three replications (subculture days) in In Vitro culture laboratory, Bogor Agriculture University. The node of Torbangun was cultured in vitro on MS medium supplemented with 1.5 mg/l 6-Benzylaminopurine (BAP) and 1 mg/l Gibberellic Acid (GA3). The resulting plantlets were irradiated with gamma irradiation dose of 10, 20, 30, 40 and 50 Gray. Irradiated plantlets transferred onto fresh MS medium supplemented with GA3 and BAP. The results showed that gamma-ray irradiation on the Torbangun plantlets produces a Lethal Dose 50 (LD<sub>50</sub>) value of 44.036. High phenotypic coefficients of variation estimates observed on plantlet height, the number of leaves, the number of shoots and the number of roots. Phenotypic coefficients of variation were higher than the corresponding genotypic coefficients in four traits studied. Physical mutation of Torbangun plantlets delivers putative mutants in leaf color changes into albino, purple, variegated green, variegated yellow and dark green.

**Keywords:** Torbangun, gamma-ray, plantlets mutant

## Trends of Ornamental Plants Offer by Nursery Shops around Denpasar, Bali

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**Abstract.** Ornamental plants are one of horticulture plants for decorating garden, landscape, cut flowers and display in offices, hotels or festivals. Consumer demands to buy seedlings, plants or flowering pot may change due to flower color or usage of the plants. The study was conducted to explore kinds of ornamental plants that offered by nursery shops and how to propagate the plants. Exploration with observation was carried out in the field or nursery or ornamental plant shops. The study focuses on plant type, propagation methods, price and selling trends. In facts, some nurseries at the same area sell ornamental seedlings and flowers almost the same with others nurseries. The type of ornamental plants that offered were bedding plants, potted plants, cactus, flowering plants and others leafy plants. The price is based on type of ornamental plants in a range between Rp. 2,000 to hundred thousands rupiahs. Propagation of ornamental plants including cutting, layering, sowing seed. Based on consumers, demands of orchids, roses, chrysanthemums flower increased during festive season or wedding ceremonial time. In other hand, demands of bedding plants and other seedlings plants increased during rainy season.

**Keywords:** propagation, seedlings, potted plant, flowering plants





# Trends of ornamental plants offer by nursery shops around Denpasar, Bali

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# TOPIC

- Ornamental plants
- Nursery around Denpasar
- Consumers
- Trends
- Conclusion



# Ornamental plants



Used for:

-healing and reduce stress

-cut flower

(bouquet and ceremonial for Balinese)

-soft material for landscape

-display at office, airport, hospital, hotels

-decorating stage

-festival

# Purposed of study

- Explore kinds of ornamental plants that offered by nursery
- Identification how to propagate plants in general





# Nursery around Denpasar

Mostly located around

- Hayam Wuruk street (2 km from Sanur)
- Renon area

What to offer?

- Orchids, roses, chrysanthemum, cactus
- Bedding plants and potted plants
- Big plants (Plumeria, Palm tree, Coconut tree)

# Consumers demands

- Increase during festive season and Idul Fitri
- Week ends
- Rainy season
- Graduation



# ANTHURIUM

on year 2007



# Flowers for Balinese offering



Impatiens, marigold, plumeria and pandanus leaves



# Flower uses for Balinese ceremonial

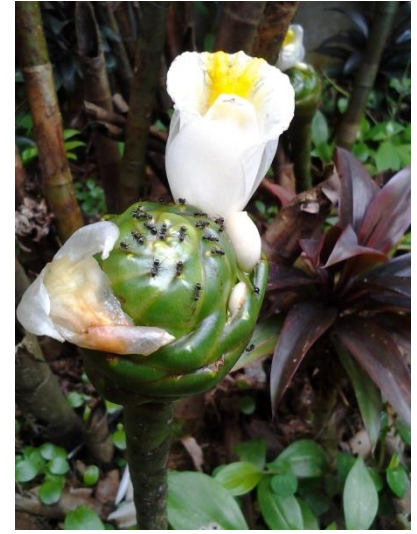


# Another flower for offerings and praying



# Trends

- What to offer?
- How to offer?
  - personally
  - shops
  - order OnLine
- How to deliver?
  - Go- ... On Line





# Conclusion

- Flowers demand increase on festive or wedding ceremonial
- On line shopping
- Home gardening to provide for offerings



Thank you

