Advancements in Environmental Biotechnology

Dr. Roohi
Dr. Alvina Farooqui
Dr. Aisha Kamal

AARGON PRESS

Advancements in Environmental Biotechnology

Editors

Dr. Roohi

Dr. Alvina Farooqui

Dr. Aisha Kamal

Department of Environmental Science

Integral University, Lucknow (U.P) INDIA

AARGON PRESS

New Delhi

Advancements in Environmental Biotechnology

Dr. Roohi, Dr. Alvina Farooqui and Dr. Aisha Kamal

Published by
Aargon Press
EG-130, Inderpuri,
New Delhi-110012, India
Tel.: +91-11-9958121300
Email: info.aargonpress@gmail.com
Website: www.aargonpress.com

Disclaimer:

ISBN: 978-93-94070-17-2

Printed at: Aargon Press, New Delhi

TABLE OF CONTENTS

CHAPTER 6

EFFECT OF PLANT GROWTH REGULATOR GA_3 (GIBBERELLIC ACID) ON ESSENTIAL OIL YIELD IN LEMONGRASS (*CYMBOPOGON FLEXUOSUS*)

Mehtab Khan[1], Ahamad Faiz Khan[1*], Farina Mujeeb[2], Bushra Ahmad[1] Suhail Ahmad[1], Gyanendra Tripathi[1]

Department of Bioengineering, Integral University, Lucknow, Uttar Pradesh, India.

[2]Department of Biosciences, Integral University, Lucknow, Uttar Pradesh, India.

[1*]Corresponding author: faizkhan@iul.ac.in

Abstract

In the recent years, there has been a tremendous diversity in the research area of plant growth. Many researchers are studying the behavior of PGRs on Aromatic and Medicinal Plants. One such aromatic plant is the Lemongrass (*Cymbopogon flexuosus*). *Cymbopogon flexuosus* is a species of grass in the *cymbopogon* genus best known by the common name lemongrass. This is a perennial grass, native to Southeast Asia, especially India, and it is cultivated for its essential oil. The essential oil of this plant, which contains the active compound citral and geraniol, is valued for its aroma and for a number of traditional medicinal and household uses. Lemongrass oil has been shown to be an effective insect repellent when applied to stored grain and beans. PGRs are chemical substances that generally function as chemical messengers for intracellular communication and profoundly influence the growth and differentiation in plants. This chapter provides the deep insights on role of PGRs on essential oils yield by modulating the key enzymes involved in terpenoid pathway.

Keywords: Plant growth regulators, GA_3, Essential Oils, Citral, Geraniol