



Davao del Sur State College
Brgy. Matti, Digos City, Davao del Sur

Agricultural Biotechnology

Laboratory manual



Agricultural Biotechnology



PREFACE

This Laboratory Manual in **Agricultural Biotechnology** is designed to provide students with practical learning experiences that complement theoretical knowledge in the field of biotechnology and its applications in agriculture. The manual presents a series of carefully structured laboratory exercises that focus on key concepts such as microbial fermentation, biofertilizer production, probiotic applications, and sustainable agricultural practices.

The activities included in this manual aim to develop students' technical skills, critical thinking, and scientific understanding of how microorganisms and biotechnological processes contribute to improved agricultural productivity, environmental sustainability, and food security. Each laboratory exercise is designed to be outcome-based, ensuring that students are able to apply scientific principles through hands-on activities and real-world scenarios.

This manual is aligned with the standards and requirements set by the Commission on Higher Education (CHED), particularly in fostering competencies in agricultural biotechnology, laboratory skills, and research-oriented learning. Emphasis is placed on safety, accuracy, observation, and analysis to prepare students for professional practice and advanced studies.

It is hoped that this manual will serve as a valuable resource for both students and instructors in promoting experiential learning and innovation in agricultural biotechnology.

Continuous improvement of this material is encouraged through feedback, ensuring its relevance to emerging technologies and industry needs

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