DARMS B1
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National Agriculture and Resources Research and Development
System/Development of Agriculture Research Monitoring System

PART I. BASIC INFORMATION

1. Project Title: Propagation of Phil 2014 Series

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3. Implementing Agency: Sugar Regulatory Administration

4. Research Sites: SRA-LAREC Pampanga

5. Duration

5.1 Date Started: March 2020
5.2 Date Ended : November 2023
Submission of Terminal Report: December 2023

6. Development/Ecosystem Zone: Upland, Plain

7. Technology Level: Technology Generation

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PROPAGATION OF PHIL 2014 SERIES VARIETIES

Abstract

Fourteen selected varieties of Phil 2014 series were planted, propagated, and given care and maintenance in SRA-LAREC from March 2020 - November 2023 as source of planting materials for the National CooperativeTest/ Ecological Test in different locations in Luzon and Mindanao. These varieties were Phil 2014-0955, Phil 2014-0013, Phil 2014-0243, Phil 2014-0389, Phil 2014-0417, Phil 2014-0679, Phil 2014-0703, Phil 2014-0727, Phil 2014-0983, Phil 2014-1057, Phil 2014-0405, Phil 2014-0459, Phil 2014-0723, and Phil 2014-0729.

Introduction

The development of new and improved crop varieties is a critical endeavor in ensuring global food security. It is a continuing process undertaken in all crop breeding programs. This process involves various breeding strategies and rigorous testing to identify superior plants with desirable traits. However, before a promising variety can truly be evaluated, it must first undergo a crucial step: propagation.

Propagating, or multiplying, the recommended varieties allow researchers to produce enough plants for reliable testing. In sugarcane, propagation may involve cuttings with 2-3 eyebuds, pre-germinated seedlings or tissue culture. While propagation itself may seem like a simple step, it holds significant importance in the overall success of variety development.

As one of the stages in the sugarcane breeding program, promising clones selected from the Preliminary Yield Test undergo propagation to produce sufficient supply for the establishment of the Ecological Test in at least five mill districts in Luzon and Mindanao.

MATERIALS AND METHODS

Time and place

Propagation was conducted at the Luzon Agricultural Research and Extension Center (LAREC), Floridablanca, Pampanga from March 2020 to November 2023 under sandy soil conditions.

Clones/Varieties Propagated

Phil 2014 - 0013	Phil 2014 - 0703
- 0243	- 0723
- 0389	- 0727
- 0405	- 0729
- 0417	- 0955
- 0459	- 0983
- 0679	- 1057

The clones were planted in two rows, 60 meters long each.

Cultural operations and maintenance

Soil sample was taken before land preparation and analyzed at the LAREC soil laboratory as basis for fertilization. The area was prepared with a series of plowing and harrowing to pulverize the soil. After planting, replanting was done at one and a half months to maintain uniform population among the test entries. A series of off-barring and hilling-up were undertaken to cultivate the soil for the proper growth and development of the crop. Fertilizers were applied at one and a half months and before closing of the canopy based on the fertilizer recommendation report. Weeding and irrigation were also undertaken whenever necessary.

The first planting materials were taken in 2021 for the establishment of ECOTEST in Pampanga and ended in April 2023 after establishment in Bukidnon. The area was maintained until November 2023.