

**THE EFFECT OF GROWING MEDIA AND SHALLOT EXTRACT ON
THE GROWTH OF ROOTS AND SHOOTS OF CACAO (*Theobroma
cacao* L.) CUTTINGS ORTHOTROPIC SHOOT COCOA (OSC)
SULAWESI 01 CLONE**

Supervised by Nisa Budi Arifiana, S.ST., M.P.

Rini Febriyanti

*Plantation Plant Cultivation Study Program
Department of Agricultural Production, Jember State Polytechnic*

ABSTRACT

Over the past five years, there has been a decline in land area, seed production, exports and constraints on cocoa cultivation. Therefore, it is necessary to increase cocoa production by producing superior varieties through clonal propagation. However, vegetative propagation methods such as cuttings still face obstacles, namely root growth, especially related to the growing media and growth hormone treatment. This study aims to determine the best interaction between growing media and shallot extract on the root and shoot growth of Sulawesi 01 cloned cocoa cuttings. This study was conducted at the land of Seed Technology Laboratory of Jember State Polytechnic from July to November 2025. The study used a Factorial Randomized Complete Block Design (FRCBD) arranged in a Split Plot Design with a main plot of growing media 3 levels of treatment: M1 = Sand, M2 = Sand + Topsoil (1:1), M3 = Sand + Topsoil + Compost (1:1:1), and a subplot of shallot extract also with 3 treatment levels: B0 = Control (without shallot extract), B1 = 50% shallot extract, B2 = 100% shallot extract. The parameters observed included shoot growth time, number of shoots, shoot length, shoot stem diameter, root volume, percentage of successful cuttings, and percentage of living cuttings. The results showed that the interaction between growing media and shallot extract had no significant effect on all observation parameters, but the treatment of growing media M2 (Sand + Topsoil) had a significant effect on the percentage of live cuttings.

Keywords: *Cocoa cuttings, growing media, shallot extract.*