

**Seafast Center-IPB Tropical Plant Curricula:
Research Plan on Potency of Waterleaf (Talinum triangulare Jacq Wild) as A Source of Soluble Dietary Fiber and Turkey Berry (Solanum torvum Swartz) as An Antimicrobial Compound**

Nuri Andarwulan^{1,2,*}, Lilis Nuraida^{1,2}, Yolanda Silvia Prabekti² and Reisa Astri Kusuma²

¹ Southeast Asian Food and Agricultural Science and Technology (SEAFast) Center, Bogor Agricultural University (IPB), Bogor.

² Department of Food Science and Technology, Faculty of Agricultural Technology, Bogor Agricultural University (IPB), Bogor.

*Corresponding author: nuri@seafast.org

ABSTRACT

Indonesia has numerous indigenous vegetables that potential as medicinal plants. Unfortunately, those have not been optimally utilized since lack of explorations of their nutritional compounds and functional properties that can provide beneficial for human health. Concerning the circumstances, Southeast Asian Food and Agricultural Science and Technology (SEAFast) Center-IPB has preliminary initiative to study in-depth the nutritional aspects and functional properties of several medicinal plants as models namely waterleaf (Talinum triangulare Jacq Wild) and turkey berry (Solanum torvum Swartz). The aim of this research is to investigate waterleaf (Talinum triangulare Jacq Wild) as a source of soluble dietary fiber and turkey berry (Solanum torvum Swartz) as an antimicrobial compound. The research is carried out in order to strengthen the indigenous potency of medicinal plants in Indonesia towards positive health benefits when ingested. The research on waterleaf (Talinum triangulare Jacq Wild) consists of three main work stages, i.e. (1) organic and inorganic cultivation of waterleaf (Talinum triangulare Jacq Wild) plants; (2) sample preparations of wet and dry sample methods; and (3) physicochemical analysis that covers moisture content, total dietary fiber, soluble and insoluble fiber, pectic substances and profile of oligosaccharides. Meanwhile, the work stages on turkey berry (Solanum torvum Swartz) research consists of (1) organic and inorganic cultivation of turkey berry (Solanum torvum Swartz); (2) sample preparation and extractions using organic solvent; (3) qualitative and quantitative analysis of bioactive compounds of various turkey berry (Solanum torvum Swartz) extracts, and (4) antimicrobial activity test of turkey berry (Solanum torvum Swartz) extracts against some pathogens using well diffusion method. Moreover, the metabolomics analysis of turkey berry (Solanum torvum Swartz) is also done. The research on both vegetables is still ongoing and is expected to be accomplished in 2 years.

Keywords: Indigenous vegetables, organic and inorganic cultivation, water leaf, turkey berry, bioactive compound