COST ANALYSIS OF CORN SEEDER BETWEEN DIBBLE, SEMI MECHANICAL AND MECHANICAL TYPE

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ABSTRACT
The development of corn agroindustry nowadays is always followed by the development of sustainable mechanization technology. The mechanization technologies have been applied in corn production process, especially for soil tillaging, but not much applied in seeding process. Many innovation and experiment that concern in seeding technology have been done by academician. Yet the innovation have been well developed, the study of financial aspect in the application of such newly developed technology is often neglected. Besides the study of financial aspect is as important as study on its performance. Thus, the process of developing new technology should be enhanced with study on its financial aspects such as feasibility study. Purpose of this research proposal is to have a engineering economy analysis on newly developed corn seeding technology, they are semi-mechanical corn seeder “CO Seeders” which developed by Mechanical and Biosystem Engineering (Bogor Agricultural University) students, dibble corn seeder “V Model” and mechanical corn seeder “Grain Seeder” which developed by Development Center of Agricultural Mechanization. Evaluation of such alternatives will be studied in order to obtain the conclusion of a machine that has the best cost efficiency. Evaluation of alternative will be conducted using Present Worth Cost (PWC) method and base cost method. Engineering economic modelling with PWC method shown that the “Grain Seeder” mechanical type corn seeder is have the least cost at 61 ha and more whereas the base cost method have the “Grain Seeder” least cost at 37 ha and more.

Keywords: corn seeder, engineering economy, evaluation of alternatives, present worth cost, base cost