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Development of a Mechanical Cacao Sheller for Cacao Farmers in Davao Province, Philippines

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Abstract

Cacao production has been the primary source of income among hundreds of thousands of smallholder farmers in East Asia. Nevertheless, many developing countries have gained economic breakthroughs from cacao exports amounting to US$2.5 billion in international trade according to the International Cocoa Organisation, 2008. The number of cacao farmers in the Philippines are increasing from 15000 due to the massive effort in building up the cacao industry. However, they are only getting about 3–6 % percent profit share out of a chocolate bar. They are missing golden opportunities by helplessly giving the sole leverage to high end confectionery manufacturers the bigger opportunity in the value chain. Should this continue to remain, cacao farmers will continue to be disenfranchised for the next generations. Hence, the cacao industry in the Philippine shall remain passive and the dangers of another setback is inevitable.

Cocoa, the main ingredient for chocolate products and other confectionaries can be a potential revenue earner for the Philippines if farmers were provided with the proper postharvest technologies. Unavailability of postharvest machineries for cacao continues to beset the Philippine Cacao Industry. Based on the 2016–2020 Cacao Roadmap of the Philippine, provision of appropriate postharvest facilities is one of the important areas that needs to be given serious attention.

In the value chain of cacao, the removal of the outer covering of dried cacao beans is very critical because it will keep the cacao nibs, the edible portion to be free from the health hazard effects of ochratoxin. This process is known as the shelling process. Shelling process is one of the primary processes and critical steps in the processing of chocolate or any product that is derived from cacao beans. Quality standards only allow less than 2 % of shell content within the mass of nibs; a tall order that cannot be met without the use of innovative machines.

The impact of this study is to provide cacao farmers the opportunities to engage in value-adding activities. Consequently, provision and availability of needed postharvest machines like mechanical cacao sheller will revolutionize the current state of cacao industry in the Philippines.

Keywords: Cacao farmers, cacao nibs, development, mechanical cacao sheller, Philippines, value-adding

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