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REDUCTION IN CARBON DIOXIDE EMISSION IN BLOCK RUBBER PRODUCTION BY BIOMASS GASIFICATION

N. Rajagopal and Thomas Sebastian

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During the processing of block rubber, a major share of energy is required in drying. The power and fuel used together constitute around half of the direct cost of production of block rubber. This forced the processor to explore alternate and cost effective sources of heat energy which led to the introduction of biomass gasifiers in the block rubber sector. The utilization of biomass gasification technology is found to reduce the drying cost of block rubber by 50 per cent when compared to diesel fired driers. It would also result in considerable reduction in the emission of CO_2 in addition to avoiding the use of fossil fuels. This technology has further scope for contributing towards CO_2 emission reduction in natural rubber processing as very little quantity of block rubber is now being dried with this technology.

Keywords: Biomass, Block rubber, CO_2 emission, Field coagulum, Gasifier technology, TSR.

INTRODUCTION

Rubber tree (*Hevea Brasiliensis*) is now grown in the tropical regions of Asia, Africa and America. Nearly 93 per cent of the rubber plantations are in Asian countries. According to the International Rubber Study Group (IRSG), the total global production of Natural Rubber (NR) is 10.01 million MT during 2009-10. The corresponding figure in India is 0.83 million MT and India is the fourth largest producer and the second largest consumer of NR.

Natural Rubber is an important industrial raw material and can be processed into dry form and liquid form. The major dry rubber grades are ribbed smoked sheet (RSS), crepe rubber and technically specified rubber (TSR) which is commercially known as block rubber. The major processed forms of NR latex are centrifuged latex and creamed latex.

Globally, block rubber constitutes around 60 per cent of the total NR production followed by RSS which is around 28 per cent. In India, RSS occupies the major share with 69.5 per cent followed by block rubber (14.5 per cent) during 2009-10. The share of latex concentrates was around 10.3 per cent during the same period.

Production of block rubber was first started in Malaysia in early 1960s and introduced in India in the year 1972. The main advantage of block rubber is that it is technically certified rather than visually graded as in the case of sheet and crepe

Correspondence: N. Rajagopal (Email: nrajagopal@rubberboard.org.in)