

## AGEING OF MATURE AREA AND DECLINING YIELD PROFILE OF NATURAL RUBBER IN INDIA

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The paper is focused on the trends in age-composition of mature area under natural rubber cultivation in India from a long-term policy perspective. The analysis is based on official data pertaining to historical planting of natural rubber and commercial yield profile of the clone RR21 105 during its life cycle. The results highlighted a steady growth in area under the yield declining phase and the resultant downward trends in estimated average crop yield since 2001-02. The projected share of area under the yield declining phase is 46 per cent and the projected average yield is 1593 kg/ha for the year 2014-15. Since the estimated average yield and production since 2001-02 are at variance with the official data, there is need for a reliable database on the age composition of area under rubber for long term policy interventions.

Keywords: Age-composition, *Hevea brasiliensis*, India, Mature rubber plantation, Yield projections, Yielding phases.

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### INTRODUCTION

The outcomes of trade policy reforms launched in India since the early 1990s varied across different sectors and sub-sectors of the economy. One of the important consequences of the reforms in the plantation sector has been growing market uncertainties mainly due to the market integration process during the past one-decade. Despite the differences in the gravity of issues arising from uncertainty in farm gate prices, policy perceptions on strategies to confront the challenges are primarily focused on reducing the cost of production across the major plantation crops. Among the various options to attain the cost competitiveness, sustained increase in yield has acquired prominence in the agro-management

revitalisation programmes. However, for perennial crops there are well-defined biological and technological limitations for sustained improvements in yield for the following three important reasons: (i) higher initial investment (ii) longer gestation period and (iii) a prolonged economic life *vis-à-vis* annual crops (Nerlove, 1979). More precisely, relative flexibility for yield augmenting measures in the short-run is limited and therefore, at any given point of time, the yield and total production of perennial crops are primarily determined by the variety and age-composition of the existing plantations (Akiyama and Trivedi, 1987). As the growers normally choose the high yielding varieties of planting materials either for new planting or