

**APPROPRIATENESS AND REQUIRED MODIFICATIONS FOR
EXISTING MACHINERIES IN PADDY PRODUCTION IN NORTH
CENTRAL PROVINCE**

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A study has been carried out in *Anuradhapura* and *Polonnaruwa* districts with special reference to land preparation, harvesting, threshing, and satisfaction level of paddy farmers toward their machineries. Data were collected using semi structured questionnaire from 116 machine owners and eleven machinery importing and distributing companies in North Central Province. Information on type of machines, selling detail, local modification, specifications of machines was collected from companies. Satisfaction level, initial and maintenance cost, safety, energy consumption rate, required modification and drawbacks associated with machines and new machinery requirements were collected from farmers. Descriptive analysis, multiple regression analysis and Non parametric one way ANOVA (Kruskal Wallis) techniques were used. Results showed that, due to the scarcity of manual labor and human drudgery, farmers were using alternate source of power to carry out different farming activities. 59.5 % of the sample was using two wheel tractors as major farm power source. Riding type two wheel tractor population was 63.8% while walking type was 36.2%. Most common two wheel tractor types were Sifang (22%), RV 125 (19%) and RK 80 (16%). 72% of the sample used combine thresher for paddy threshing while 28 % used combine harvesters. None were using animal or manual methods for paddy threshing. Most popular combine thresher was *CIC Kamatha* (92.9%) and *Agrotech* (8.2%). Most popular four wheel tractor type was *TAFE 45D* (59%) because, low initial cost and low fuel cost. Factors affecting for number of machines per farmer, were labor availability, monthly income, land extend and they have given significant impacts (-0.343, 0.003 and 0.016 respectively). However there is no evidence to prove that tenure land extend, total labor cost, respondent age and occupation had significant influence on number of machinery. Any modification of the existing machineries is not required for farmers.

Key words: Machinery requirement, Machinery modification, Satisfaction