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## Implementation of Mechanisation Model for Rice Production System to Support Food Security

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### Abstract

Model of implementation Mechanisation for Rice Production System is done in Sidowayah Village, Klaten district, Central Java Province. The research method is institutional approach with the rationale of corporate development in developing integrated agricultural area by applying Economies of scale, which the principle is the wider the more efficient, in term of business cost which includes plant management, production facility cost, transportation costs and marketing costs of farm products. Through the cooperative there will be consolidation of business that facilitate access of information, capital, and bargaining position in the market. The essence of the corporate concept is to build cooperation through a single management system, by merging small farms into a large scale business that meets economies of scale to become more efficient, high productivity, homogeneous products, and higher production quality that are prerequisites for improving competitiveness, added value and improve production quality. Institutional factors is an important element in the successful implementation of mechanisation, technical assistance and management is necessary to improve the performance of gapoktan (group of farmer group) institutional. Reformed gapoktan to empower gapoktan as the main driver in rice production system, from the land preparation to harvesting and marketing activities. Institutional strengthening includes technical and management, from technical aspect of operator training and basic maintenance of machines. As for the management, the method is meetings, socialisation, discussion and comparative studies. Strengthening gapoktan institutions in synergy with BUMDES (village owned corporation) empowering gapoktan to handle rice production system from supplying farm input, land preparation, transplanting, weeding, harvesting and selling the paddy. And this new system increase farmer income Rp 1.5 to 2 million per stakes (1 stakes = 1/3 ha). So the implementing rice mechanisation is directly give profit for farmers.

**Keywords:** Farmer institution, mechanisation, rice production