

Status of farm mechanization in Durg district of Chhattisgarh

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■ **ABSTRACT :** This study was conducted in 40 selected villages of Durg district of Chhattisgarh during year 2011. A total of 600 farmers were selected randomly from all the 40 villages (15 farmers from each village) as respondents for this study. The aim of the study was to analyze the status of farm mechanization for the farmers and availability of animal drawn implements in the farmer's fields for the improvement of agricultural production. The data were collected with the help of pre-structured interview schedule through personal interview and analyzed with the help of suitable statistical methods. The study reveals that the majority (57.43%) of the respondents used country plough as a primary tillage implement, 75.56 per cent used cultivator as a secondary tillage implement in the district. In case of traditional sowing methods majority (57.43%) used broadcasting method for sowing and in case of improved seed sowing implements majority of the respondents used seed drill. The bottleneck except in mechanization and the traditional practices was due to lack of extension programme, availability of equipment, knowledge about new technology, farm roads and small land holding with fragmented field.

■ **KEY WORDS :** Farm mechanization, Implements, Tillage, Durg, Chhattisgarh

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Farm mechanization is the application of engineering and technology in agriculture operation to do a job a better way to improve productivity. This includes development, application and management of all mechanical aids for field production, water control, material handling, storing and processing. Mechanical aids include hand tools, animal drawn equipments, power tiller, tractor, oil engines, electric motors and hauling equipments. Mechanization is a need based process which provides sufficient time gap for self adjustment of various inputs without causing sudden impact of changes. Farm mechanization is based on a total agricultural system, which is deeply connected to socio-economic environment of each country. Mechanical equipments for various farm operations like tillage, sowing, irrigation, plant protection and threshing etc are generally being used by the farming community. The package of modern technology includes the use of more efficient and economical farm implements and machinery and suitable forms of farm power.

Farm mechanization is a different area of fully mechanized, in which modern machines are being put to uses for land preparation, land development, inter culture operations, sowing, transplanting, harvesting and threshing. Simply it means the use of machinery and improved implement and tools for farm operations in the place of human and animal. Farm

mechanization has been helpful to bring about a significant improvement in agricultural productivity. Thus, there is strong need for mechanization of agriculture operations (Starkey, 1998).

Tools, implements and powered machinery are essential and major inputs to agriculture. The term mechanization is generally used as an overall description of the application of these inputs (Clarke, 2000). Din *et al.* (2007) describes the status of constraints in amenability to agricultural mechanization with respect to cropping pattern, labour availability and manufacturers of implements then reported that the farm mechanization is very poor in terms of mechanical power, matching and efficient implements and equipment drawn by draft animal power, power tiller and tractor, water management, renewable energy and post harvest activities. Topography, location and proper input non-availability are constraints. Singh (1999) reported that the modernization of agriculture, the use of mechanical power in agriculture has increased but draught animal power (DAP) continues to be used on Indian farms due to small holdings and hill agriculture. More than 55 per cent of the total cultivated area is still being managed by using draught animals as against about 20 per cent by tractors. Ray (1993) studied the status of farm mechanization and constraints. He reported that the use of