

## Enhancing agricultural mechanization for small and marginal farmers through draft animal power: Its prospects and constraints

M.K. GHOSAL AND D. BEHERA

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See end of the Paper for authors' affiliation

Correspondence to :

**M.K. GHOSAL**

Department of Farm Machinery and Power, College of Agricultural Engineering and Technology, Orissa University of Agriculture and Technology, BHUBANESWAR (ODISHA) INDIA  
Email : mkghosal1@rediffmail.com

■ **ABSTRACT** : The present utilization of draught animals for agricultural operations is declining mainly due to drudgery involved in the use of animal operated traditional tools and implements. The younger generations show resistance to walk behind the animals for field operations and instead prefer tractor/mechanical powered implements for cultivation. However, considering the merits of animal based farming system, the younger generation need to be educated and motivated for improved use of work animals including the byproduct utilization for higher economics. Improved riding type cultivation equipment for multiple cropping, single/paired animal carting, pack load transport, rotary mode operation for agro processing equipments, electricity generation, water lifting and by-product utilization for organic farming are the pertinent avenues to increase the potential use of animal power which would ultimately reduce the demand for additional electrical and mechanical power in agricultural farming system resulting into savings of fossil fuels and electricity for other requirements. Use of animal energy in Indian agriculture may remain as a continuing priority for small farms due to prevailing land holding pattern, socio-economic condition of farmers and ecological compulsions.

■ **KEY WORDS** : Agricultural mechanization, Draft animal power, Animal based farming

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