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A TECHNICAL EVALUATION OF IMPROVED ANIMAL DRAWN IMPLEMENTS UNDER ON-FARM  
CONDITIONS<sup>a</sup>

by

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## **ABSTRACT**

Animals are a major source of agricultural power in India and animal drawn implements have evolved to a high degree of simplicity and perfection over a long period of time. A comparison is made between some improved machinery and the traditional machinery in terms of field capacity and draft, using on-farm data. It is shown that the field capacity of the improved machinery is usually higher than the traditional machinery and that total draft might be higher or lower depending on the particular operation.

## **INTRODUCTION**

Animals are the chief source of power in Indian agriculture with more than 64% of the energy input in farming originating from animal sources. This bullock power resource in India is extremely valuable and it is important that it be used to the fullest extent (Subrahmanyam and Ryan 1975). Many implements using animal energy as motive power have evolved to a high degree of simplicity and perfection over thousands of years (Ramaswamy 1978). Emphasis on the development of animal drawn machines and implements is given to better utilise the abundantly available animal power and also to improve the machinery for timely completion of tillage operations needed to increase and stabilize crop yields to meet the growing food demand of increasing population.

In the late 1950s and early 1960s considerable efforts were being put into the development of animal drawn wheeled tool carriers (ADT). The ADT is a frame with two wheels to which a large range of implements can be attached. The frame provides horizontal and vertical stability to the implements, some means of depth adjustment of the implement, and a mechanical device for lifting the implement for transport or lowering it into the working position. This concept never became popular due to mechanical





































