

## **IMPROVED BULLOCK CARTS**

### **PRESENT SCENARIO**

Animal drawn carts, especially bullock carts, are the oldest mode of transportation, existing in India and in few other countries since the past unknown. About 15 million bullock carts exist in India. Statistic shows that number of bullock carts has not reduced in last 30 years, belying the popular concept that bullock carts will disappear with the development of society. Reasons are many. The fact is that still in India, bullock carts are the most important mode of transportation in many parts of rural India. Unfortunately, the technology of the carts has not been improved. The conventional bullock carts are made of wooden wheels and bamboo / wooden load carrier (known as platform). More than 80% bullock carts are of conventional type. Only a few number of carts has been partially converted to metallic (which can not be termed as 'improved'). As this mode of transportation will exist in India, there is need for the improvement of the technology.

### **NEED**

- Improved bullock carts will be durable (more than 25 years), which will provide better economy to the farmers or poor people for whom the bullock carts are meant for livelihood.
- As scientifically produced source of energy (fossil fuel) is depletable, use of animal energy should be increased as much as possible.
- It is very sustainable method of communication where road connectivity is poor and time is not a limiting factor.
- It will help to increase agricultural products with minimized loss.
- It is environment friendly, pollution free.
- Fabricated bullock carts will generate rural employment.
- Deforestation will be reduced as the improved carts will use steel as the main materials.

### **ADVANTAGES**

1. The bullock carts are made of steel, mostly welded, so are very rigid.
2. Design and configuration are very simple, so that it is manufactured by rural fabricators easily.
3. Very less self weight of the carts. About 280 Kg for 2.0 Ton capacity and about 210 Kg for 0.5 Ton capacity.
4. Centre of Gravity has been kept very low and on the top of mid-axle to have better balance.
5. Square or rectangular tube sections have been used to provide better load bearing properties to the carts.
6. The carts can be modified to suit any type of use.
7. Mechanism of carts is very simple, so that minimum maintenance is required.
8. Bearings have been provided at wheels to reduce pulling force.
9. Brakes have been provided for smooth movement of carts.
10. Brakes are flexible enough to be operated from front or rear and in combination or in isolation.

11. Metallic wheels are interchangeable with pneumatic wheels with minor modification of carts.
12. Yoke is of bamboo or wood to reduce injury on animal's shoulder caused by over-heating.
13. The carts are aesthetic and may be coloured as per operator's choice.



**Fig.1: 2.0 Ton Carrying Capacity Bullock Cart**



**Fig.2: 0.5 Ton Carrying Capacity Bullock Cart**

West Bengal Regional Office of NABARD has approved the 'Unit Cost' of INSDAG designed improved bullock carts. 'Unit Cost' of 2.0 Ton bullock cart is Rs.13000/- (Rs.23000/- including cost of two bullocks). 'Unit Cost' of 0.5 Ton bullock cart is Rs.10000/- (Rs.15000/- including cost of one bullock).

