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# SOURCES OF FARM POWER

## HUMAN POWER

- Human beings are the main source of power for operating small tools and implements.
- They are also employed for doing stationary work like threshing, winnowing, chaff cutting and lifting irrigation Water.



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- It is generally believed that there is surplus human power
- available for agricultural operations in India. According to 2001 census figures, the total Indian rural population is about 74 crores.



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**Advantages: Easily available and used for all types of work.**

**Disadvantages: Costliest power compared to all other forms of power, very low efficiency, requires full maintenance when not in use and affected by weather condition and seasons**



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# ANIMAL POWER

The most important source of power on the farm all over the world and particularly in India is animal.

It is estimated that nearly 80 per cent of the total draft power used in agriculture throughout the world is still provided by animals, although the number agricultural tractors has become double after every ten years since 1930.

India with its 22.68 crore cattle possesses the largest number of cattle in the world. Among them the bullocks and buffaloes happen to be the principal sources of animal power on Indian farms



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**Advantages: Easily available, Used for all types of work, Low initial investment, Supplies manure to the field and fuels to farmers and Live on farm produce.**

**Disadvantages: Not very efficient, Seasons and weather affect the efficiency, Cannot work at a stretch,**

**Require full maintenance when there is no farm work, Creates unhealthy and dirty atmosphere near the residence and Very slow in doing work.**



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# MECHANICAL POWER

The third important source of farm power is mechanical power that is available through tractors and oil engines.

The oil engine is a highly efficient device for converting fuel into useful work.

The efficiency of diesel engine varies between 32 and 38 per cent, whereas that of the carburettor engine is in the range of 25 and 32 per cent.

In recent years, diesel engines and tractors have gained considerable popularity in agricultural operations



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**Advantages:** Efficiency is high; not affected by weather; can run at a stretch; requires less space and cheaper form of power

**Disadvantages:** Initial capital investment is high; fuel is costly and repairs and maintenance needs technical knowledge.



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# ELECTRICAL POWER

Now-a-days electricity has become a very important source of power on farms in various states of the country.

It is steadily becoming more and more available with the increase of various river valley projects and thermal stations.

On an average about 1/10th of the total electrical power generated in India, is consumed for the farm work.





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**Advantages:** Very cheap form of power; high efficiency; can work at a stretch; maintenance and operating cost is very low and not affected by weather conditions.

**Disadvantages:** Initial capital investment is high; require good amount of technical knowledge and it causes great danger, if handled without care.