

# Sources of farm power



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Humans, animals and machines are all used as sources of power in rice production.

## Human Power

Many tasks on farm are still undertaken using people as the power source. Manual tasks undertaken and time required include:

- Land preparation (120-160 days/ha)
- Plant establishment (25-35 days/ha)
- Weeding (30-40 days/ha)
- Crops harvesting and transporting (30-40 days/ha)
- Transport (5-10 days)
- In Africa, 80-90% of all farm tasks are still done manually.



## Animal power

Animals are still widely used as the major power source in many countries. Buffalo tend to work better in wet conditions and oxen in dryer conditions. One animal will take approximately 10-12 days to plough 1 ha.

## Engine powered tractors

There are 2 broad groups of engine powered tractors used for rice production. These are 2-wheel tractors and 4-wheel tractors.

### Two-wheel tractors

Two-wheel tractors are also often called walking tractor, iron or steel buffalo, and hand tractor. Rubber tires are used for dry land preparation and for transportation. Cage wheels are necessary for all wet workings. One 9 kW walking tractor, with two operators, is capable of plowing 1 ha per day.

### Four-wheel tractors

Four-wheel tractors can be divided into 2-wheel drive and 4-wheel drive types.

- Two-Wheel Drive tractors (2WD) are often used in dryland farming and for transportation. When these tractors are used in wet farming situation, they need cage wheels attachments to the rear drive for traction.
- Four-Wheel Drive tractors (4WD) are the most popular 4-wheel tractors used in rice production. They range in size from 15-180 kW and have better traction and fuel efficiency than 2WD tractors of the same size. A 40 kW 4-wheel tractor is capable of plowing 1 ha in 2-3 hrs.



Assam Agribusiness and Rural Transformation

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