

# Gains from farm mechanisation



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Whether it is the impact of MGNREGA on the attractiveness of farm employment, the impact of growing rural-urban links that provide new avenues of employment to the rural labour force or the improvements in farm machinery, the potential for increased mechanisation of farming in India appears to be on the rise.

While animal-powered farm implements are still used widely, despite the lure of machine-powered equipment and the difficulties in maintaining bullocks, the rising cost of farm labour may be instrumental in changing the choices.

## SHIFT IN PREFERENCE

The significant increase in the production and sale of tractors in the current year is certainly one indicator of the changing scenario. Shifts such as these are gradual and there will have to be many successful examples before other farmers pick up from the early leaders.

While earlier debates may have restrained the policy incentives for mechanisation of farm operations, economic compulsions have slowly pushed agriculturists to the use of machine power. This does increase the use of fossil fuels in farming. But the trade-off will be in the overall gains in efficiency and productivity. Machine power may also bring in new ways to conserve soil and water.

There is no telling what has happened to the number of bullocks and bullock-drawn implements in the re-



**Increasing mechanisation** will strengthen the agriculture-industry interface and push up the demand for farm credit

cent years. The five-yearly or decadal count of farm implements does point to a shrinking number of such devices.

The use of tractors is not limited to large farms, although the rate of penetration is far greater in such farms. The size of smaller farms may push farmers with such holdings to mechanisation in order to reduce operational costs. But the need to retain control over timing of critical operations will also mean that they must own, maintain and operate the machines themselves.

Thus, even as animal power is becoming more expensive, along with costlier farm labour, it is also losing out on time-efficiency as farm labour finds alternative demands. Tractors, of course, do a lot more than just plough the land. They do everything

on the farm that the bullocks do, except provide manure! Transportation is a clear advantage with the tractors. The multiple uses of tractors increase their attraction for small farm agriculture. Although rural transport needs, in general, may have added to the attractiveness of tractors, such a requirement is unlikely to be the main driver of demand for tractors.

## INDUSTRY INTERFACE

Increasing mechanisation will also increase the interface of agriculture with industry. Just as expansion of irrigation meant a greater need for pumpsets and fuels, expansion of machine-powered farm operations will require manufacture of such machinery and their maintenance. It will also add to the need for working

capital and credit for farmers for the purchase of machines. Mechanisation will also come with new technologies for farm operations, leading to better seeding, plant protection and harvesting. Small holdings have always been a challenge in the adoption of mechanised operations. Development of equipment and machines to make them commercially viable for small farms has, apparently, not been easy to achieve.

With the improving support structures for agriculture, whether it is connectivity, credit or markets, there is now the possibility of greater rewards for innovation in technologies for small-farm agriculture.

Mechanisation will obviously not only substitute labour in some instances, but it will also add to demand for labour of another kind. It will require differently skilled labour, increasing the work opportunities for rural labour. But there are also the costs. The requirement for more capital will mean the need for significant borrowed funds.

While a part of agriculture is stable because of irrigation and diversity, it is also prone to uncertainties of weather. The change in technology will also often be irreversible. There will be a need for caution on the part of farmers as machines take over the work of bullocks.

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**T**he rural economy often throws up surprises. It acts as a source of demand even when there is slump in demand elsewhere. This feature of rural demand may fade as the rural-urban distinction becomes weaker and farm operations become more and more commercialised. However, for the moment, there is the unrealised potential of the rural sector as a growing consumer of goods and services in the non-farm sector.

Stable demand for agricultural produce makes the farm sector a reliable source of demand, both for the input industries as well as for the consumer goods industry, even when supply of farm produce is dependent on weather. The potential for mechanisation of farm operations has always been recognised. However, the economics of it has held back its expansion. The constraints remain but changes in the rural sector may make the wider use of mechanised power in farming more viable.

One major indicator of changes on the farm front is in the pattern of use of animal power and of farm labour.