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Three new types of innovative sickles promise better delivery



The farmer is unable to get financial support to popularise these devices

Hand tools are particularly important for small farmers and laborers who cannot afford mechanized implements.

“Even a small improvement in these hand tools can lead to large-scale improvement in productivity or in working conditions across the country. However, de-centralised production and small scale of operations do not allow these hand tools to undergo notable changes over the years,” says Prof Anil Gupta, Vice Chairman, National Innovation Foundation (NIF), Ahmedabad.

Take the example of the simple sickle that is being used by thousands of farmers across the country for cutting grass, weeding etc. Though a simple tool, its usefulness and efficiency make it an important tool in every farmer’s household.

Regular sharpening

“But the blade needs to be sharpened at least once every two days. Farmers usually grind

the blade against a sharp surface or take it to the ironsmith to sharpen it. This becomes a routine in the villages,” says Prof Gupta.

But Mr. Kishorebhai Bharadwa from Junagadh thought differently. He developed three different types of sickles that need not be sharpened regularly, and can be used for weeding, inter culturing, and harvesting.

“These address the problem of wearing out of blades in sickles due to repeated sharpening, as the shearing blades usually become blunt after cutting grass for a period of between eight to ten hours,” says Mr. Kishorebhai.

“In a normal sickle one needs to sharpen the whole blade at regular intervals. Repetitive sharpening makes the base thin and redundant. To avoid this, I developed three different types of sickles,” he explains.

Thin blade

The first type of the improved sickle incorporates two C-shaped, metallic guard plates — a thin blade sandwiched between and fastened in position through screws near the wooden handle.

The thin blade can be removed and sharpened and then fixed back to the iron base. The user need not go to the workshop for sharpening it. The second is dual type. The two sickles face opposite directions and are joined together at the base near the wooden handle.

Mr. Kishorebhai notes that this sickle can cut tough grass, silage or hay. It is fashioned in such a way by using the right grade of steel to retain its sharpness. If the blade on one side gets blunt, the other side can be flipped and used.

Concave shape

He shaped the third type like a concave shaped edge and attached a small pointed metal piece attached between the sickle and the handle to break soil clods.

“These sickles are multi-purpose and can perform different functions like harvesting, interculturing, and weeding. They offer easy handling and maintenance to the farmer and

labourer,” says Mr. Kishorebhai. Furthermore they are cheaper than the combined costs of conventional tools used for these specific processes.

Cost

The first model costs Rs.90, the second Rs. 65, and the third model is priced at Rs.55. The replacement cost of the blades varies between Rs.15 and Rs. 20.

Though these improved sickles receive a satisfactory reception from the villagers, their adoption rate is extremely slow, feels Mr. Kishorebhai.

“Most villagers find the sickles quite useful but the price is beyond their paying capacity as the normal sickle costs only Rs.30. Only three farmers have purchased the improved sickles; the rest come and borrow these sickles from me,” he adds.

Mr. Kishorebhai is quite disillusioned that he is unable to muster adequate financial support to popularise the sickles.

Economic support

He feels that sustaining the innovative spirit needs economic support, a rare commodity he does not possess adequately.

The National Innovation Fund, Ahmedabad (NIF) sanctioned a sum of Rs. 8,250 from its Micro Venture Innovation Fund for pilot production and test marketing of these Innovative Sickles. For more details contact Mr. Kishorebhai Bharadwa, Post. Galvav, Manavadar taluk, Junagadh district, Gujarat: 362630, Phone: 02874- 248331.

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