Powering smallholder agriculture in Eastern and Southern Africa

How 2-wheel tractors increase farm power among smallholders
We all agree that sustainable intensification of agriculture in Eastern and Southern Africa needs our strongest attention.
We work on increasing the efficiency of land productivity, we think about improving nutrients, we notice the importance of water, but we hardly work on, think about or notice the importance of farm power.
Sustainable intensification is not possible without farm power, and farm power is decreasing.
The number of draught animals is getting smaller and smaller.

Life as a farmer is so hard that the younger generation has stopped farming and moved to the city.

Female farmers can’t bare the drudgery any longer.

Too often, the only power farmers can use is the one that their muscles supply.
At the same time, the population of Eastern and Southern Africa is urbanizing and growing very rapidly.
The demand for food is bigger than the supply.

How can this growing and changing demand be satisfied if farm power decreases?
In order to avoid even more hunger, farm power needs our urgent attention.

Since the number of draught animals is decreasing, motorized mechanization seems to be the only way to increase farm power supply for many farmers in Eastern and Southern Africa.
Based on experiences from other regions of the world, the 2-wheel tractor seems to be the form of mechanized farm power, that is best adapted to Eastern and Southern African contexts.
2-wheel tractors
don’t need much fuel,
are lightweight,
are easy to maintain,
are affordable to all.
They can be used for strip tillage and for direct planting, they are very efficient in small and fragmented fields, minimize soil degradation, and form no threat to biodiversity.
For small grain, like teff, they help to produce a considerable yield and necessitate less ploughing operations.
Attempts to provide Eastern and Southern Africa with appropriate mechanization were already made 20 years ago. Unfortunately those attempts failed.
But times have changed!

And Eastern and Southern Africa seems ready for new challenges and opportunities
The value of agriculture has increased a lot in the past 10 to 15 years. Agricultural products are becoming more and more commercially attractive. Intensification is a must and the demand for mechanization has never been so big.
At the same time, mechanization is appearing in everyday life like never before: motorbikes and tuk-tuk’s can be seen everywhere.
People who can repair those small motor engines can also repair 2-wheel tractors. The materials to fix them are available and there is no shortage of fuel anymore.
Now is the time to introduce the 2-wheel tractor into Eastern and Southern Africa. But what is the best way to do so?
First of all, we need to clearly identify the tasks that can benefit from mechanization.
After that, we can make sure we find or manufacture the right machines for the right context.

Ideally, the machines would be made locally.
Only then, should attention be given to the demand, to make farmers understand how much their lives can improve with a bit of help from a machine.
And finally, when all of this is done, new businesses can be created, capacities can be developed, and the 2-wheel tractor can be introduced into Eastern and Southern Africa the way we envision it:
As a flourishing new business that will help improve the life of farmers, manufacturers, mechanics, and all those involved.
But most importantly, help to ensure that there is enough food for everyone.
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