**The Mobile-boma**

![Image of cattle in a Mobile-boma]

Figure 1: Happy, safe and healthy cattle in a Mobile-boma. Hwange Communal lands. Zimbabwe

- A “boma” is a stockade in which we keep livestock safe at night and away from predators like lions and hyaena.
- The technology is ancient and can be found the world over, where livestock and carnivores share landscapes.
- In Zimbabwe, the traditional boma is made from timber poles with a single entrance but elsewhere in Africa, like parts of Kenya, bomas are made of thorns.
- The bomas are traditionally stationary and the manure that builds up within them is collected and placed on the crop fields to use as fertiliser. This is labour intensive and a build-up of ankle-deep manure, especially in the wet season, can be a breeding ground for disease. The build-up of smell attracts flies and predators alike.
- The high visibility through the walls of the traditional bomas is a major factor effecting predation of livestock within. Research has shown that if a lion can’t see through a barrier it won’t jump in and the same goes for the
cattle. If they can’t see the lion outside the boma (even if they smell it and hear it) they won’t break out in panic.
• The mobile boma uses zero-visibility material to take advantage of this fact and in over 3 years of use in the Hwange communal lands, not a single animal has been killed in a mobile-boma by either a lion or a hyaena.

The double advantage:
The mobile boma has a double advantage.
The first is obviously the effective protection of livestock from predators (100% so far!!) And the second advantage is the fertilising of crop fields.
The people in the Hwange communal lands are mixed agro-pastoralists who depend on the land for growing their own food and rearing livestock. Traditionally the manure from the boma is collected and placed in the fields but this only accounts for the manure itself. The key component that is lost is the urine containing the important nitrogen compounds.
The mobile boma is placed over the crop field and the cattle fertilise the field directly with their urine and manure. Their hooves break up the surface of the soil, both aerating it and allowing the “fertiliser” to soak in.

Figure 2: A villager inspects the clearly visible difference in soil between where the mobile boma was sited (dark rich soil) and where it wasn’t (rest of field).

“The Golden Formula”
Through many years of trials at The Africa centre for Holistic management, Alan Savory came up with the optimum formula.

That is 2.5 m$^2$ of floor space per head of cattle for a week or 1.5 m$^2$ of floor space per week for small stock (shoats)

Use this formula to decide on how big a boma you’ll need for your herd and at that density for a week you will get more than 3 years fertility in that space without the need for additional fertilizers.
**Design:** The design of the boma can be variable from large 25m x 25m square bomas to relatively small 6m diameter circular ones depending on your needs and herd sizes.

The initial design was sturdy poles placed every 4 meters and a nylon rope was strung between them at the top. Wire hooks held the boma material through eyelets like a curtain and the bottom was tied down to horizontal poles to keep from flapping in the wind.

Our new design is a little different and has done away with the ropes and wire hooks. Instead we have sewn “trouser legs” into the material every 3 meters and that means the material is placed over and pulled down along each pole. (see Figure 3)

*Figure 3: Circular mobile boma being erected in the Hwange communal lands.*

This new design allows the boma to be circular which means you use less material ($$) for the same amount of floor space.

The small size used here (± 16 cattle) with just 24m of material means that two or three families can share the boma instead of fifteen or twenty. From experience, people want their cattle for milk and draught power and if they are cooperating with many others the boma may be several kilometres away for periods of time. It is also much easier for three families to cooperate that fifteen!

**Cons:** The material is relatively expensive for rural communities but we are working on ways that the people can finance them themselves to remove the dependence on donor funding in the future.
Figure 4: The difference between the side of the field "treated with a mobile boma" (Right side) and that which wasn't treated (Left) is obvious to all.

Figure 5: Believe it or not! The left hand side of this field was "treated" with a mobile boma a decade ago with no further addition of fertilisers since. The right side has never been treated.

People seeing the results with their own eyes is the strongest “sell” and with zero predation in over 3 years plus >30% increase in crop yields, The results speak for themselves.