

A little chilli with you maize cob?

Chilli is the farmer's secret weapon in the battle to reap the harvest



Even the boys pound maize in Kakwenga village, where a good harvest is the main priority

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The Kakwenga family is numerous enough to have its own village. Cosmos Kakwenga counts the members off on his fingers, totting up 31 in 5 households. It's a small village in south-west Zambia, within the environs of Sioma Ngwezi National Park, just a few kilometres from the Zambezi River, and in the heart of KAZA, the world's largest transfrontier conservation area, where people live together with wildlife.

That sounds idyllic, but not when the elephants come to eat the harvest.

Cosmos has many mouths to feed, and his maize harvest is crucial. Erratic rains make a good harvest problematic, and climate change is likely to make matters worse. The WWF is working in Kakwenga village to improve matters. High on the list of priorities is conservation agriculture, which produces more maize from less land by a careful mix

of know how – planting seeds at exact distances from each other, and capturing rainwater for each plant – and of drought resistant maize varieties.

Priority number two is keeping the elephants away from the fields, while giving them more territory to forage for food. Cosmos has moved his field from a route which elephants regularly use, to a place not on the maps of their prodigious memories.

Elephants move over vast distances. During the war years, many migrated from Angola to Botswana, where they are now concentrated in numbers large enough to damage the eco-system. Between Botswana and Angola lie Namibia and Zambia. Zimbabwe makes up the fifth member state of KAZA, which is attempting to join up the conservation jigsaw puzzle of national parks and farming areas.

The plan is to create wildlife corridors linking the region's conservation areas, and farmers are the key to success. Ask Cosmos if he like elephants and he will tell you yes – from a distance. There are 3,000 elephants in the park, and evidence shows that some are moving back to their traditional territory in Angola.

Nobody knows how elephants avoid land mines, but they seem to have an uncanny knack. Their sense of smell is tremendous. The nostrils are at the tip of the trunk, which is always on the move, checking for information. An elephant can smell water two kilometres away, so it's no surprise they can sniff out a tasty maize field.

For years villagers have tried everything they could think of to keep the elephants at bay. They sleep out in the fields, lighting fires and banging drums to keep the giants away from the feast. New ideas include solar powered torches, and even vuvuzelas. It seems that not only the English Premier League is offended by the noise: elephants can't stand it.

But a farmer can't spend all his hours guarding his crop. Which is where the chillies come in.

Cosmos Kakwenga is an expert at making chilli bombs. As harvest time approaches, Cosmos gives demonstrations to other villages. The recipe is simple enough: half/half crushed chilli and elephant dung; mix with water in a bucket; and when the consistency is right, turn out the contents to dry. A small depression is made in the top of the bomb, and when it has dried out it is ready for use.

When the elephants are around, the bombs are placed around the maize field. A few glowing coals are laid on each one, and for hours they give off a pungent smell.



Cosmos Kakwenga shows how it's done. Rubber gloves are essential.

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A chilli bomb is carried out to the field.
Elephants just can't stand the smell.
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But for every solution there is a problem. Elephant dung is available in abundance, but chillies cost money. Through local NGOs, the WWF is assisting in the production of chilli. Some farmers have been trained to grow chillies near to the Kwando river that meanders between Angola and Zambia, down to Namibia. The plants need constant irrigation. The hope is that chilli will become a cash crop. Some will go for export – the Tabasco company has an interest – and some will be bought by local farmers for chilli bombs. If conservation agriculture produces surplus maize for sale, there should be sufficient money to buy chilli.

And KAZA works across borders. The Zambian WWF project has links to Namibian communal conservancies, where farmers have been encouraged to grow chilli. The Namibian human-wildlife conflict programme provides chillies to farmers who make bombs, and string out fences of chilli-soaked rags to keep the elephants away from the cobs. It seems that the recipe for success is to serve the chillies on the side of the maize.



Chilli growers in neighbouring Namibia. Rosemary Poniso's cash crop of tomatoes was trampled by elephants. Now she wants to sell chilli, as well as use it to keep the giants at bay. © Steve Felton



WWF Germany's policy and communications head, Marco Vollmar, helps to mix chilli bombs on a visit to Namibia. © WWF



Boy pounding maize: southern Zambia
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