

Scaling Up Conservation Agriculture in Zambia

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“When we harvest maize, we leave the stalks in the field. Parts of these stalks are eaten by the livestock. The fibrous part which is not eaten by the animals adds nutrients to the soil but, at the same time, when it rains, the stalks, used as mulch, help the soil to retain its moisture.”

Christopher Penias Chamoto, Lead Farmer

CONTEXT

67 % of the Zambian population depends on agriculture but agricultural productivity does not keep up with the annual population growth rate of 3%. Moreover, policies have favoured maize at the expense of crop diversification. Conservation agriculture is a way of increasing productivity even under reduced rainfall while maintaining soil fertility. Although conservation agriculture is known in Zambia, it still requires more widespread adoption. The project aims at increasing the number of farmers having adopted conservation agriculture through peer-learning, improved inputs and reliable markets.

OBJECTIVES

- Increase productivity and production of crops for food and nutrition security, income generation and improved environmental sustainability
- Promote mechanisation and animal draught power through the private sector for timely execution of farm operations

- Improve soil health by removal of hard-pan structures, increased nitrogen fixation through legume crops, and increased organic matter content through harvest residues and green manuring
- Plant indigenous Acacia tree species (*Faidherbia albida*) to further improve soil condition and fertility while also mitigating climate change and incorporating adaptation
- Improve sustainable land and water resources management
- Strengthen government extension services to effectively deliver services using the Lead Farmer Approach
- Promote private sector farming input and output supply chains and extension services

RESULTS

- By 2015, 19 500 Lead Farmers and 207 000 Follow farmers have registered under the CASU project. 41 % of them are female farmers.
- More than 600 Ministry of Agriculture extension officers, Provincial and District agricultural officers and private sector agro-dealers improved their Conservation Agriculture (CA) skills through intense technical training provided by CASU.
- More than 100 000 small scale farmers improved their skills on sustainable land preparation, 6 300 use pigeon pea for crop rotation and about 1 500 started practicing agroforestry.
- An SMS based CA extension system now reaches 68 000 registered farmers with a two way feedback system currently under development.
- During the 2014/15 agricultural season 6 main input suppliers and 97 agro-dealers in 31 districts delivered quality CA inputs to farmers.
- A CA Insaka in 2015 reunited 67 CA stakeholders who endorsed the establishment of this national CA coordination and harmonization platform.
- The project developed links with World Food Programme (WFP), 10 main aggregation centres and 46 agro-dealers for the marketing of small holder legume produce.

FACTS AND FIGURES

- Conservation agriculture (CA) enables farmers to increase their productivity, adapt to climate change and reverse environmental degradation.
- It comprises three main farming practices: minimum soil disturbance, organic soil cover and diversified crop sequence.
- The project builds on gains made by the 2009-2012 FAO implemented Farmer Input Support Response Initiative with a contribution of €16.9 million from the EU.

PARTNERS

- [Ministry of Agriculture \(MoA\), Federal Republic of Zambia\(link is external\)](#)
- [Food and Agriculture Organization of the United Nations\(link is external\)](#)

TESTIMONY

Better than conventional farming



Maggie Mainza, Lead farmer

I started conservation agriculture in 2010. Its advantage is that it is very easy to finish your activities in time. Even when the rains are not enough, you still have enough water in the reap lines. And applying fertilizer is very easy because you just apply it within the lines. As soon as it rains, I will plant the crop within the lines. Conservation agriculture is good because it doesn't spoil the land and gives higher yields.

First I was a follower farmer but then I was picked to be a lead farmer in 2012 because I was so good in the lessons. Anyone can become a lead farmer if they perform well. I work with my follower farmers. We have weekly meetings to share knowledge and exchange ideas. We are not jealous of each other and work hand in hand.

One of the challenges we face with farming is having enough draught animals. I have 33 animals and can use my own animals. About half of my follower farmers have their own draught animals – some of them have even more animals than me – but others do not and will need to borrow from their neighbours. We work together as a team, helping those who do not have animals. We also help each other with harvesting. One of our challenge is to hear the weather forecast to know when it is going to rain because when it rains, we need to plant crops.

Some lead farmers have mobile phones and can be informed about the weather and can tell their follower farmers but others do not.

We plant soyabeans, maize and groundnuts in rotations. The legumes add nutrients to the soil. The trees planted here also add nutrients to the soil and are good for livestock fodder.

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