

ZAMBIA

MOOTO FARMS

Presenter

Mooto farms limited

Description

Zambia has not been spared by the effects of climate change. The amount of rainfall is minimal and temperatures have continued raising making farming very difficult and expensive.

Most farmers in Zambia cultivate maize since it is the staple food. Due to the shortage of rainfall, the maize crop is slowly failing to perform, resulting in hunger in the low-income class and very high prices for those that manage to harvest a little in order to compensate for their loss in the failed crop.

The cost of production is very high and since the yield is very low due to drought, this increases the poverty levels of the farmers.

In order to cope up with those challenges, farmers of Mooto Farms implement the following:

- Planting early maturity crops and also diversifying from maize only to other drought resistant crops such as cashew nuts, cassava and millet;
- Providing shade using shade nets for small trees on the nursery to prevent them from the scorching sun;
- Practicing vegetative propagation through soft wood grafting to ensure that they have high breed produce, early maturity, high yield and good quality produce;
- Pruning trees to make sure they are exposed to the required sunlight for photosynthesis and high yield;
- Coordinating with support groups, such the metrological department for weather updates, to make informed decisions;
- Using the recommended pesticides to ensure crops are healthy and free from diseases;
- Practicing irrigation by use of bore hole water supply powered by generator and use drip irrigation systems;
- Coordinating with agro-dealers to ensure having inputs on time to avoid delays and disturbances in framing programs;
- Practicing conservation farming;
- Having planted economic value trees such as mangoes, oranges, nuts, lemons, paw paw and other fruits to lessen the burden on maize;
- Having sensitized other farmers to avoid bad farming practices of burning bushes, cutting down trees for charcoal and other uses;
- Practicing mixed farming that is poultry, piggery, fish farming and crops. This chain is good as these activities support each other. Example chicken manure can be feed for the pigs, pig dung can be used as feed for fish, and water from the fishponds can be used as manure for the crops;
- Making sure to be up to date with market trends and prices.



Results

- Early maturity crops reduce risk on crop failure as the crops will mature fast within the short rain season;
- Because of the right information, losses are minimized;
- Conservation farming assists in the retention of the little water collected during the rains. This assists in keeping the crops moist and reduces water loss through evaporation;
- Because more trees are planted, this assists to cool the high temperatures on the farms and increases the chances of rainfall;
- The planting of fruit trees helps the diversification of income, as farmers are able to sell fruits as well. Most fruits produce throughout the year, thereby assisting Mooto farms with a continuous flow of income;
- Tree plantations are easy to manage and are cheaper and have long term benefits;
- Cashew nuts are valuable products also because the cost of production is minimal and the harvest can last for about 50 years.
- The cashew nut plantations do not need a lot of water, therefore, it reduces costs of production.

Climate smartness

MOOTO FARMS initiative include a number of practices, which may contribute to all CSA pillars. For example, diversification of crops, the use of early and drought resistant varieties and irrigation contribute significantly to adaptation and resilience, while reduction/elimination of burning bushes and cutting down trees is effective for mitigation.

The use of weather forecast and agro-climate information might help significantly the effectiveness of the practices proposed by MOOTO FARMS. Combination of recommended pesticides with organic inputs might reduce negative impact on soils and GHG emissions generation. Efforts in building capacity showed in the initiative is highly valuable, strengthening knowledge regarding future climate behaviour, crop management and planning activities would significantly increase adaptive capacity of rural families.

For more information about CSA in Zambia, in the study of World Bank and CIAT (2017b), it is possible to identify several practices for Zambia evaluated around 8 key criteria: Water, Carbon, Nitrogen, Energy, Knowledge / Info risk, Yield, Income and Soil.

