



How farmers are responding to climate change in farming cooperatives in Mashonaland East, Zimbabwe.

The most popular adaptation strategies our farmers in Goromonzi ward 17 and 18 are implementing to mitigate climate change includes planting short season varieties, crop diversification, and varying planting dates. The main thrust of these strategies is increased diversification and escaping sensitive growth stages through crop management practices that ensure that critical crop growth stages do not coincide with harsh climatic conditions in the season. Crop diversification improves household food security since different crops are affected differently by the same climatic conditions.

Also, given the high frequency of mid-season dry spells and shortening of the rain season, farmers grow short season and drought-resistant crop varieties, such as sorghum, Rapoko, and Finger millet. For a staple crop, such as maize, instead of planting local varieties, farmers have opted for hybrid maize that take a shorter cycle period to mature and yield more than traditional varieties in good years. Altering inputs, varieties and species for increased resistance to heat shock and drought, flooding and salinization; altering fertilizer rates to maintain grain or fruit quality; altering amounts and timing of irrigation and other water management; altering the timing or location of cropping activities.





Soil and water conservation strategies, such as water harvesting activities are some of the ways in which farmers are engaged in dealing with the effects of climate change.



Soil mulching is being practiced by farmers in this area to preserve the soil. The mulch stops the hot, drying sun and winds from penetrating the soil and thus conserves soil moisture and coolness. The layer of mulch also protects the soil from erosion, caused by wind and heavy rains. Mulching helps soil fertility. Mulch materials contain minerals and plant nutrients.

Greener Farming, Department of Agriculture is helping farmers adapt to climate change, even if they don't believe in global warming. The government now provides extension workers with technical support on best practices to deal with a changing climate, including preserving buffer wetlands to cut down on both erosion and flooding. National forests and grasslands will now be managed with the goal of storing carbon dioxide, among other aims. Already farmers have begun adopting various techniques to reduce greenhouse emissions, including precision agriculture to grow crops efficiently, cover crops to reduce soil erosion and biodigesters to reduce animal waste.

Most farmers are also moving from flood irrigation to drip irrigation. Drip irrigation helps to conserve the available little water at their disposal.



Drip Irrigation is a kind of micro irrigation system that saves water but at the same time ensures that water reaches the roots of the plants. It works to drip slowly. Drip Irrigation can work from both above or under the surface of the soil. It works effectively to ensure that all your plants get what they need. Due to improper water supply, fertilizers and nutrients cannot reach the roots of every plant.



Drip Irrigation system helps it to reach effectively. If you want to gain efficiency in water application, then installing the Drip Irrigation system is a must. Field leveling is done by installing this type of irrigation system. Whatever your field capacity is, they need moisture. Roots should be hydrated. Soil erosion and weed growth are reduced. Water distribution can be controlled. According to the necessity, water is produced to every root. Managing river basins for more efficient delivery of irrigation services and prevent water logging, erosion and nutrient leaching; making wider use of technologies to “harvest” water and conserve soil moisture; use and transport water more effectively.

Farmers in Zimbabwe are now diversifying to other projects apart from growing crops. Diversifying income through the integration of activities such as livestock raising and fish production.



Making wider use of integrated pest and pathogen management, developing and using varieties and species resistant to pests and diseases, improving quarantine capabilities and monitoring programmes. Increasing use of climate forecasting to reduce production risk.



Matching livestock stocking rates with pasture production altered pasture rotation, modification of grazing times, alteration of forage and animal species breeds, integration within livestock, crop systems including the use of adapted forage crops, re-assessing fertilizer applications and the use of supplementary feeds and concentrates.

Undertaking changes in forest management, including hardwood/softwood species mix, timber growth and harvesting patterns, rotation periods; shifting to species or areas more productive under new climatic conditions, planning landscapes to minimize fire and insect damage, adjusting fire management systems; initiating prescribed burning that reduces forest vulnerability to increased insect outbreaks as a non-chemical insect control; and adjusting harvesting schedules. Introducing forest conservation, agroforestry and forest-based enterprises for diversification of rural incomes. Altering catch size and effort and improving the environment where breeding occurs, reducing the level of fishing in order to sustain yields of fish stocks.

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