



FARMER FIELD SCHOOL EXPERIENCE RELATED TO CURRENT DROUGHT AND SUCCESSFUL ADAPTATION OF/SHIFT OF CROPS

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Introduction

- According to the Zimbabwe Vulnerability Assessment report, 4 million people are food insecure in Zimbabwe.
- The Government and Development partners are spending about 1.6 billion dollars (USD) for food aid to feed the 4 million people
- The country requires 1.6 million tonnes of maize grain and 400 000 metric tonnes of small grains annually

Background

- CTDT and partners established a total of 72 women-led Farmer field schools across project sites
- Farmer Field Schools carry out other related activities like seed and food fairs, participatory variety selection,
- Capacity building - Trainings in the FFSs include adaptation strategies which include Conservation Agriculture, crop diversification, in-field water harvesting techniques, staggered planting
- Farmers are diversifying their crops and varieties. Planting is also being staggered to counter erratic rainfalls.
- Farmers are now prioritising growing small grains (millets and sorghums) and legumes (cowpeas and groundnuts) and reducing on maize
- Crop diversification – FFSs members participate in activities like seed fairs where they exchange seed and they grow a wide range of crops and crop varieties as a measure not only to adapt to climate change but to ensure food and nutrition security
- Members of the FFSs are also involved some micro-finance activities like Income Savings and Lending which is also key in improving liquidity at household level

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Experiences Related to El Niño Induced Drought

2015/16 Season Quality – based on information recorded in Farmer Field Schools

- The 2015/16 rainfall season was quite complex and marked by erratic rainfall.
- According to the seasonal forecast issued by the Meteorological Services Department generally average rainfall with a bias towards above rainfall was projected for most areas.
- This came at the backdrop of a strong El Nino phenomenon.
- The phenomenon causes lower than average rainfall experienced in the sub-region
- While conditions at the surface were good for rainfall development, the strong Botswana upper high (an anticyclonic airflow occurring between 5km and 7km above the surface) inhibited meaningful cloud development.
- Therefore poor temporal and spatial rainfall distribution characterized the season.

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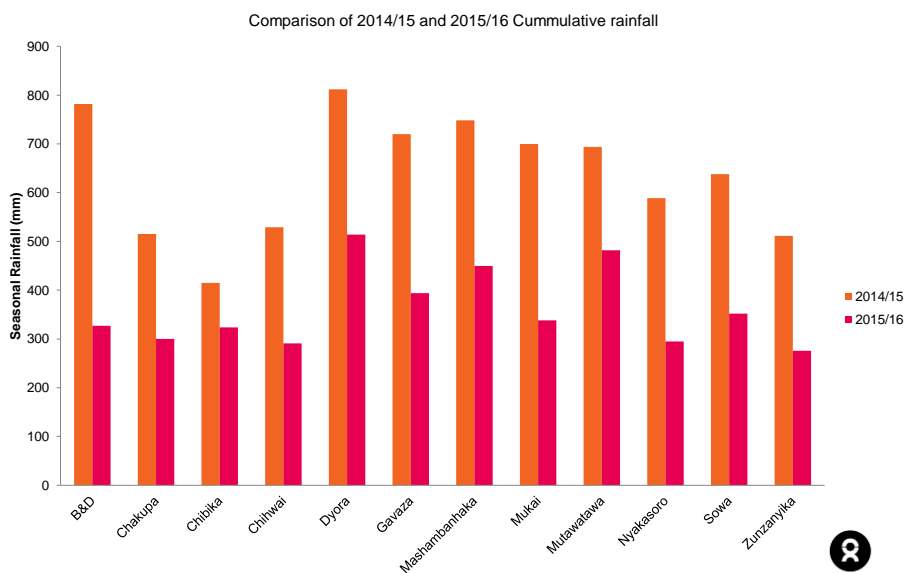
Experiences Related to El Niño Induced Drought (Cont.)

- Start of the Rainy Season (SOS) is defined as the date when at least 20 mm is received in 1 or 2 consecutive days after 1 October after which there should not be a dry spell of more than 10 days in the next 30 days.
- SOS varied from location to location.
- SOS varied between 4 and 10 December 2015
- Whilst planting was done, germination rate was 50% or less, of which most of the crops permanently wilted due to lack of rainfall and excessive heat.
- Average daytime temperatures went up by at least 3 ° C between October and early March compared to the same period in 2014/15 season.
- Evaporative losses were therefore very high affecting crop development.

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Rainfall Distribution: Information Recorded in Farmer Field Schools



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Rainfall Recordings in Farmer Field Schools

FARMER FIELD SCHOOL	Oct(mm) 2015	Nov(m m) 2015	Dec(mm) 2015	Jan(mm) 2016	Feb(mm) 2016	Mar(mm) 2016
B&D	0	33	81	136	77	0
Chakupa	0	32	72	44	15	137
Chibika	0	32	82	34	41.5	94
Chihwai	4	32	55.5	145.5	54	0
Dyora	0	24	122	124.5	59.5	159
Gavaza	3	32	151	63	54	91
Mashambanhaka	0	42.5	81	146	58	122
Mukai	0	10	77	0	178	73
Mutawatawa	0	40	79	90	146	99.5
Nyakasoro	0	38	84.5	15	52	105
Sowa	25	19	111	20	69.5	107.5
Zunzanyika	0	43.5	118	35.5	30	49



Effects on Livelihoods and How Farmer Field School Participants Adapted

Livelihood systems were severely affected by the erratic rainfall.

- More than 80% of the crop wilted beyond recovery. Most women farmers had to replant 3 or 4 times
- Only FFS participants managed to plant the 3rd or 4th time because they had to go back to the seed bank to withdraw seed. The late planted crop (small grains) survived the drought
- Water sources dried up and seasonal streams never had any water flowing. Animals would normally water from these streams. There is competition for water between people and animals from small dams. Women are walking long distances to fetch water for domestic use
- Horticulture was also affected and women are being trained in FFSs on vegetable value addition.

How FFS Members Successfully Adapted

- Most members are involved in Community Seed Banking introduced by the project
- Seed exchange – members in FFSs participate in seed fairs where they exchange seed increasing diversity
- Farmer Field Schools are carrying out other related activities like participatory variety selection which will increase their crop genetic base
- Capacity building - Trainings in the FFSs include adaptation strategies which include Conservation Agriculture, crop diversification, in-field water harvesting techniques, staggered planting

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Crops Reached Permanent Wilting as a Result of Drought



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Community Seed Banking- Members of the FFS Had to go Back to CSB to get Seed so that They Could Replant



Crop Diversification: members in Farmer Field Schools learn about crop diversification and are practicing this at their own farms



Crop diversification and inclusion of early maturing crop varieties (legumes and cereals) in the cropping program (the crop planted in January 2016 survived the drought)



Participatory Variety Selection Work – Breeders, Extension workers, farmers work together in FFSs to develop varieties that are adaptable to local conditions and farmers are selecting varieties with traits they want (earliness, high yield, disease resistance etc.)



Conclusion

- The NPL program has contributed significantly towards knowledge and experience sharing
- The project is also contributing to crop diversification of crops which are adaptive to climate change
- Restoration and enhancement of lost crop genetic resources by working with community and national gene banks
- The project has facilitated access to good quality seeds thereby enabling increased food production and nutrition security at household level
- Women constitute 60% of the project beneficiaries which ownership and control of the means of production