

Farmers Coping with Covid-19 & Climate Change

8866 Sq. miles

≈ 400,000 people

Rural pop. 54.7 %

Urban pop. 45.3 %

(SIB, 2010 http://sib.org.bz/wp-content/uploads/2017/05/Environmental_Statistics_2012.pdf)



(<https://geology.com/world/belize-satellite-image.shtml>)

Farmer Demographics in Cayo, Belize

- Primarily the function of men and youth
- 47 % of population live in rural communities
 - (Source: Statistical Abstract and LSMS (2009))
- Unemployment rate: 15 % (Source: SIB, LFS; 2009: LSMS)
- Employed in Agriculture: 17.8 % (Source: GOB/CDB, 2010)
- Household poverty rate: 29.8 % (of which 7.1 % is indigent)
 - (Source: GOB/CDB, 2010)

Agriculture enterprises in Cayo

- Beef cattle
- Dairy cattle
- Sheep
- Pigs
- Poultry
- Citrus
- Sugar cane
- Grains
- Vegetable crops



Major challenges faced by Cayo farmers

1. Drought 2019 to present
2. Forest fires
3. Lack of extension service for livestock farmers
4. Lack of vets specialized in sheep and goats
5. Lack of organization
6. Covid-19 has reduced consumer purchasing power
7. High reliance on imported farm inputs

Major challenges faced by Cayo farmers



Photos courtesy of Carlos Itza, 2020

Forest fires devastated fields and some farmers lost livestock



How are Cayo farmers adapting?

1. Downsizing production
2. Diversifying production
3. Implementing best practices
4. Investing in cheaper solutions
5. Developing marketing techniques
6. Changing their animal genetics
7. Investing in water harvesting
8. Organizing

How are Cayo farmers adapting?

- Downsizing production
 - Many farmers have been forced to sell animals
- Cattle prices have fallen by 40 – 60 % in domestic market
- Most beef cattle farmers who relied entirely on export market to Guatemala are stockpiling cattle and fear the drought and bankruptcy

How are Cayo farmers adapting?

- Downsizing production
 - Farmers who supplemented income with tourism are selling off horses and diversifying into sheep
 - Many small farmers sold their entire sheep flock because the price dropped from \$ 3.00/lb. to below \$ 2.00/lb. (live weight)

How are Cayo farmers adapting?

- Farmers are diversifying
 - Many inexperienced farmers are introducing sheep
 - Consumer demand increased as price fell
 - Many livestock farmers are exploring home gardens



How are Cayo farmers adapting?

- Farmers are implementing best practices



Farmers are making silage and experimenting with making their own pellet feeds

How are Cayo farmers adapting?



How are Cayo farmers adapting?

- Investing in cheaper solutions



How are Cayo farmers adapting?

- Changing their livestock genetics



Some are culling Dorper genes and introducing purebred BBB sires available from the Sheep and Goat Genetic Project at the Taiwan Technical Mission

BBB

1. Heat tolerant
2. *Haemonchus contortus* resistance

How are Cayo farmers adapting?

- Investing in water harvesting systems



Ponds and Rotoplas reservoirs

1. Costly
2. Long term solution
3. Thus far ineffective due to prolonged drought

* Many farmers still harvest water from the river using the farm pickup

How are Cayo farmers adapting?

- Farmers are organizing with support from the TTM, MoA & Cooperatives Dept.
- CRFA = Cayo Rural Farmers Alliance
- Livestock and crop producers with common goals
- Men, women and youth involvement

Cayo Rural Farmers Alliance

Benefits:

1. Organization support
2. Technical workshop on sheep production (TTM/MOA)
3. Grant – TTM drought relief fund for sheep and goat farmers
4. Farmer to farmer technical and farm input support



TTM grant provided drought supplement which positively impacted sheep and goat production.

How are Cayo farmers adapting?



Technical training by TTM & MOA personnel. Photo courtesy Mrs. Ena Itza

How are Cayo farmers adapting?

Summary

Farmers are resilient but need help

Many technical and technological alternatives available

In our experience the most impactful adaptive mechanism is for farmers to **ORGANIZE!**

THANK YOU

