

Progress in agro-environmental policy for the protection of soil biodiversity in Cuba

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INTRODUCTION

The Brazil-FAO International Cooperation Program, subscribed in 2008 between the Government of Brazil and the FAO Regional Office for Latin America and the Caribbean, identified the need to strengthen agro-environmental policies in the countries of the region as an indispensable step towards achieving the objectives of sustainable development and food and nutritional security. This is the background to the implementation of the Project on Strengthening Agro-environmental Policies in Latin American and Caribbean Countries (GCP/RLA/195/BRA), which aims to promote dialogue and knowledge sharing among stakeholders involved in the formulation and implementation of rural development and natural resource management policies and strategies, in order to move towards an agro-environmental policy.

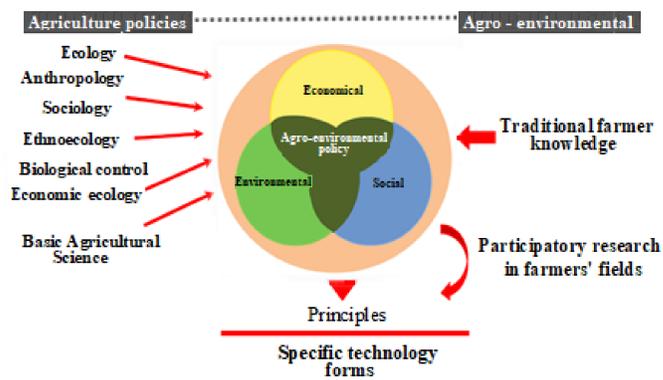


Fig. 1. Dimensions of development and agro-environmental policy in Cuba

Where soil degradation and contamination are revealed as some of the most complex problems and difficult to find adequate solutions, without having achieved, to date, definitive or conclusive results that would allow the loss of biodiversity to be halted and endangered species to be protected, through widely and effectively implemented sustainable agricultural practices (IISD, 2017). Based on this background, the present work aims to demonstrate the strengths of the agro-ecological movement in Cuba to promote an agro-environmental policy together with voluntary guidelines in sustainable soil management, to protect its biodiversity and the sustainable development of the nation.

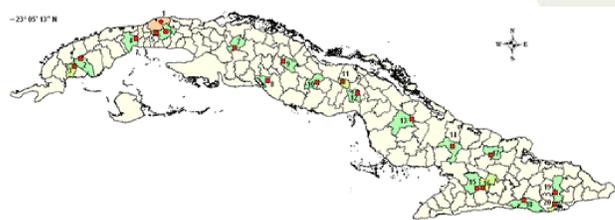


Fig. 2 By the end of 2019, there were 189 polygons in the country covering an area of 12,380 ha on 845 farms, covering 32,281 ha on 1,916 farms located in different soil and climate regions and the most important crops.

MATERIALS AND METHODS

The methodology was based on the application of an interactive process with a system approach in which 30 government institutions and society in general participated, as well as around 575 people including specialists, researchers, farmers, students, innovators, extension workers, project directors and decision makers, agreed upon in 17 dialogue tables or participatory work sessions (Figure 3) in nine provinces of the country.

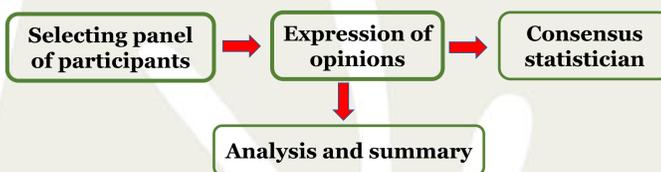


Fig. 3 Interactive process with a system approach for building an agricultural policy based on agro-environmental principles

MAINS RESULTS

Main criteria provided by the participants in the national dialogue tables

-It is identified as a strength to have a consolidated national agro-ecological movement, supported by the state and civil society, internationally recognized, with willingness, knowledge and experience to increase certified organic production.

-It is important to recognize the effort that the Cuban State is making to guarantee agricultural and forestry development from an agro-environmental point of view, although the investments and resources demanded by this strategic sector are still insufficient.

-The challenge of the future will be to develop agro-environmental protection and consolidate agro-ecological systems as a higher level for maintaining their biodiversity.

Main actions carried out in the polygons

Preliminary studies show increases in carbon stocks in the upper layers of the soil as a result of the practices applied, as well as the effectiveness of the study of macro fauna as a qualitative indicator

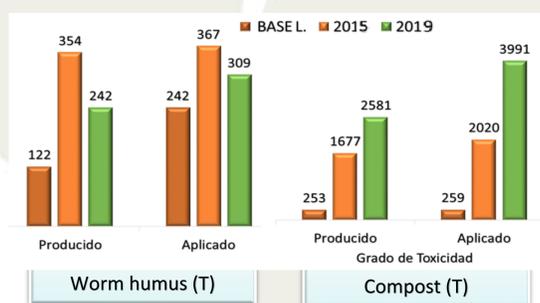


Fig. 4 Increased production with the application of organic fertilizers

Soil, Water and Forest Conservation Polygons

"The polygon", while serving as a demonstration area, is a place that remains with the systems of measures implemented, where it is possible to measure the impacts generated in the short, medium and long term to promote capacities and address the effects of climate change on biodiversity.

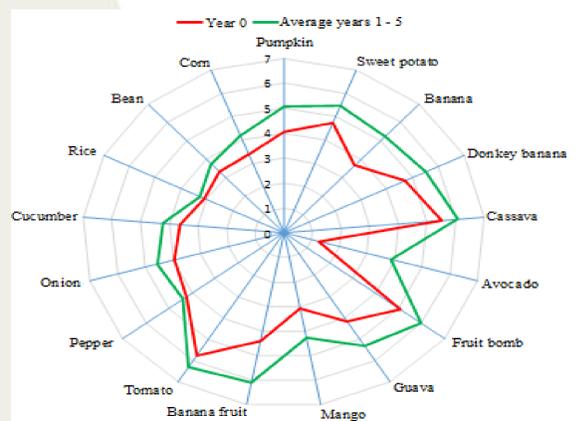
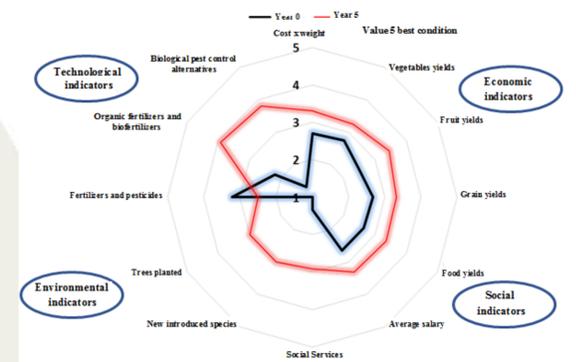


Fig. 5. Evolution of sustainability indicators in 17 sites in the country subject to sustainable land management practices. (Value 5 best condition). Source: Calero (2015)



Fig. 6. Impact of agro-ecological strategies on biodiversity