Land Use Policy 28 (2011) 723-735

Contents lists available at ScienceDirect

Land Use Policy



journal homepage: www.elsevier.com/locate/landusepol

Cuban agricultural policy in the last 25 years. From conventional to organic agriculture

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ARTICLE INFO

Article history: Received 15 January 2010 Received in revised form 22 December 2010 Accepted 29 December 2010

Keywords: Agricultural policy Land management Urban agriculture Organic agriculture Cuba

ABSTRACT

Political, social, economic and environmental changes undergone in Cuba in recent decades have led to several well-differentiated production models or systems, and have led to profound transformation of Cuban farmland. This article analyses those changes and transformations in three key stages or chronological periods of Cuban agricultural policy, the Green Revolution, the Special Period and Economic Reanimation. The analysis emphasizes the environmental, social and economic effects of each period, and especially, the change from a conventional intensive to an alternative or organic farming system, which has become an example to be followed.

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Introduction

With an area of 110 860.6 km², the Republic of Cuba is the largest country in the Caribbean islands. In 2006, according to the FAO Statistical Yearbook 2007–2008 (FAO, 2009), 32.76% of its area was farmland, 3.85% permanent crops and 23.16% pasture (Table 1). The area of farmland and pasture remained practically constant from 1994–1996 to 2006, with a 14.6% decrease in the area for permanent crops. 21.4% of the farmland and permanent crops are irrigated. The rural population represents 24.4% of the total population (2006), and the agricultural population is 14.1%. The rural population decreased slightly from 1994–1996 to 2006, and the agricultural population decrease is observed in the same period (4%). A similar decrease is observed in the active agricultural population, even thought this activity continues to be the backbone of the Cuban economy.

The transformation of Cuban agriculture began in 1959, after the Agricultural Reform Law was passed on May 17th of that year. Rodríguez (1987) believes that the social and economic policy applied to the agricultural sector up to the mid-eighties was positive in every way, stressing its flexibility and adaptability to the different forms of tenancy and land use. In the eighties, the agro-industry was the largest sector of the Cuban economy and furthermore, had the most mechanized agricultural sector in Latin America (Rosset, 1997a; Rosset and Altieri, 1997). In the nineties, the fall of the socialist block and intensification of the economic blockade negatively affected Cuban agriculture, and alternative production methods had to be found. The results of these changes have been observed in recent years in the development of urban and organic agriculture.

Rural development since the beginning of the Cuban Revolution in January 1959, which was also important, stressed promotion of settlements to ensure community welfare, development of rural infrastructures for progress (communities, roads, transportation, electricity, etc.), development of educational, health and other service programs, creation of better working and living conditions to motivate farm workers and lift their personal aspirations, and promote collectivized work (Jiménez, 2005). These measures transformed the living conditions of the rural Cuban population, but at the same time, they contributed to the appearance of undesirable collateral effects, such as dependence on foreign intermediate goods and technology, degradation of the environment, soil compaction and erosion, deforestation and water pollution. The cooperative movement, which was based on the transforma-



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Table 1

General indicators of Cuban agriculture during the Special Period and during the period of Reanimation of the Economy.

	Land use					
	Unit	1995		2000		2006
Arable land	1000 ha	3 6 8 4		3 504		3634
Permanent crop	1000 ha	500		550	427	
Pastures	1000 ha	2 500		2 500		2 569
	Irrigated land					
	Unit	1994–1996	1999-2001	2004	2005	2006
Irrigated land	1 000 ha	873	870	870	870	870
Share in arable land and permanent crops	%	21.1	20.9	21.0	21.2	21.4
	Population					
	Unit	1994–1996	1999–2001	2004	2005	2006
Total population	1 000 hab	10929	11141	11247	11260	11267
Agricultural population	1 000 hab	2021	1820	1 666	1 627	1 588
Share in total population	%	18.5	13.3	14.8	14.5	14.1
Rural population	1 000 hab	2811	2726	2733	2747	2749
Share in total population	%	25.7	24.5	24.3	24.4	24.4
Economically active population in agriculture	e 1 000 hab	834	780	727	713	699
Share in total economically active	%	16.0	14.1	12.7	12.5	12.1

Source: FAO (2009).

tion of social structures made possible by the Cuban Revolution, must be examined to understand Cuban rural development. This cooperativism was based on a genuinely socialist concept which is described further below.

Paretas-Fernández and López-Gutiérrez (2005) stress the current diversity and heterogeneity of Caribbean Island agricultural production systems, as products of the different economic, social, environmental, physiographic, cultural, and political conditions, in addition to tenancy and land area, which have prevailed in each country. Very serious obstacles to access and competition in the new, more complex and heterogeneous conditions imposed by the challenges and opportunities of globalization are such agrarian factors as the negative effects of the "Green Revolution", the intense pressure and poor management of ecosystems, erosion, and loss of quality and quantity of natural resources (Paretas-Fernández and López-Gutiérrez, 2005). Other factors are social and economic. such as poverty and weak rural development, production problems and quality of agrofood products, efficiency, and the rural economy which is subjected to constant pressure from the continuous rise in price of intermediate goods and low prices paid to the grower. Finally, external factors, such as decreased development aid, negative climate changes increasing over space and time, and the appearance of new pests and diseases that weaken the vulnerable and dependent situation of Cuban and Caribbean agriculture even more (Paretas-Fernández and López-Gutiérrez, 2005).

One of the consequences of the economic crisis is the dissociation between agricultural production and the sugar monocrop and industrialization directed at its export, which is strongly dependent on intermediate goods. This process requires a new vision that avoids repeating past errors and that objectively, creatively and integrally incorporates new political, social, economic and technological tools, adapted to the particular conditions of Cuba. It should also facilitate a sustained and competitive increase in quantity, diversity and quality of agrofood products.

To approach these new challenges from a historical perspective, the evolution of Cuban agriculture, the different production systems in the last 25 years, and the main milestones that have marked them must be studied methodically. For this analysis, three stages or chronological periods critical to the transformation and changes undergone by Cuban farmlands have been identified.

Key chronological periods in Cuban agriculture in the last 25 years

Studies made by Cuban and foreign researchers (Bennett and Allison, 1928; Febles, 1995; Gounou, 1997; Alfonso, 1999; Febles et al., 2001, 2007a, 2008a,b; Frómeta and Boursiguot, 2006) in various representative regions of western Cuba during the last 25 years, have enabled an integral analysis of the transformations that Cuban agriculture has undergone in three key chronological periods, the Green Revolution, the Special Period and Reanimation of the Economy.

The sequential evolution of the soil cover, "the mirror of the landscape", was taken as the main reference. As an essential component of the biophysical environment, it preserves a sort of "file" of natural processes (and of processes accelerated or triggered by man) (Mateo, 1998; Jaimez et al., 2004) which have occurred over time in a certain space. As the Russian, Vasili Vasilevich Dokuchaev (1846–1903), wisely stated, "natura non facit saltum".¹

The first stage, the "Green Revolution", took place from 1984 to 1991, and was characterized by its more agronomic than ecological approach. This period was favored by assistance from the Soviet Union and is therefore also known as the "Soviet Agricultural Revolution" (Warwick, 2000, 2001). It prioritized increased productivity by opening up new farmlands (clearing virgin land), extensive monocrop cultivation of agricultural produce for export, strong dependence on imported agricultural chemicals, use of hybrid seeds and improved varieties, machinery and oil (Rosset, 1997a; Warwick, 2001). During this period, Cuban development was based on a sugar cane economy, in spite of efforts to diversify it, and some production sectors remained undeveloped (Figueras, 1992). The environment was seriously affected by agricultural activities, as shown in the studies done by Maal-Bared (2006) and Funes (2007).

The "Special Period", which receives its name from the production and social consequences of the fall of the socialist block and the end of Soviet assistance, took place from 1991 to 1996. In agriculture, the Special Period led to an absence of the supplies that had fed the productivist agricultural policy and brought the previ-

¹ Nature takes no leaps.

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