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The success story of the implementation of the national food safety agency in Ivory Coast

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ABSTRACT

The 3C Ivoire EuropeAid project (2011–2015), set up a coordination committee in Ivory Coast to evaluate the effectiveness of sanitary controls, prevent sanitary risks and coordinate nationwide actions on food safety [1].

This paper reports main findings: difficulties to apply regulations in Ivory Coast, to establish a national food safety agency, to implement a national health surveillance system, to set up a potential food safety label, training on food safety systems (HACCP, traceability, good hygiene practices), first experimental committee of national experts.

Ivoirians are concerned by food safety hazards. All food samples collected in markets were contaminated by pathogens. Three of the main food consumed in the country: rice, maize, peanut were contaminated with mycotoxins, and aflatoxin levels in peanut paste were well above the EU limits. The decree creating the Ivorian agency was signed in late June 2016.

1. Introduction

Since 2002, Ivory Coast has faced a socio-political crisis affecting its economic development and the quality of life of its population. Despite the political stability since 2011, government food control and analysis structures in previous decades have suffered greatly from this situation and their effectiveness is markedly diminished. Despite the proposal to implement the Regional Special Program for Food Security of the Member States of the West African Economic and Monetary Union [2], Ivory Coast still lacks a coordinated and reliable national system for securing the food produced and circulating on Ivorian territory.

There are real risks to consumers and farmers, such as pesticide residues that are widespread for the control of aggressors or the contamination of crops and products derived from mycotoxins produced in the field or post-harvest by molds. These molecules with various toxic effects are sometimes found at high concentrations in Ivory Coast. In addition, residues from export products are detrimental to exports to the European Union (EU).

There is an upsurge in foodborne diseases and pathologies and an increase in food poisoning. The induced effects of this situation are, on the one hand, a serious threat to the economic development of the country, in particular due to the deterioration of the general state of health of the population, resulting in a decline in the productivity of the active population and an increase in health care spending. On the other hand, in certain Ivorian regions, there is also the problem of food shortages, penalizing these local populations doubly.

The quality and quantity of foodstuffs is therefore a key issue for public and private decision-makers as well as for scientists. During the conference "Concrete Actions to Promote Food Safety" [3], representatives of 45 African States advocated the coordination of capacity building, particularly at the national level. This coordination between public health watch structures, consumer associations, private sector, academics and research organizations would allow for appropriate actions to produce optimal and lasting results. However, this recommendation was not followed up.

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The objective of the 3C Ivoire project (3CI, 2011–2015) [1], funded by the EU (EuropeAid), was to set up a coordination committee which will ultimately assess the effectiveness of health controls, prevent health risks and coordinate scientific actions, national actions on food safety (SSA) and disseminate information to civil society and public and private actors. The project also proposed the setting up of a national committee of experts to study specifically the health problems encountered in Ivory Coast.

This publication presents a summary of the work carried out by the 4 partner institutions of the 3CI project – Center for International Cooperation in Agricultural Research for Development (CIRAD) – UMR Qualisud (www.cirad.fr); Montpellier Supagro (www.supagro.fr/web/irc/); Codinorm (www.codinorm.ci) and Institut National Polytechnique Houphouët Boigny (INP-HB) Yamoussoukro (www.inphb.edu.ci/), as well as a health inventory of foodstuffs taken from the Ivory Coast markets, obtained thanks to large-scale sampling for physico-chemical and microbiological analyzes. The report of this project served as a basis for negotiations with the African Development Bank (ADB) and the French Development Agency (AFD) to launch a call for tenders to experts for the creation of the National Food Safety Agency of Ivory Coast.

2. Methodology

The activities were carried out on the basis of protocols of action developed specifically for the 3C Ivoire project and taking into account the political and administrative specificities of Ivory Coast.

2.1. Diagnosis of regulatory difficulties

This documentary diagnosis of the Ivorian regulations was made by visiting the documentation centers and technical departments of the structures in charge of the question, consulting the official gazette of the Republic of Côte d'Ivoire and the documentary monitoring system of the Ivory Coast National standardization body called "Côte d'Ivoire standardization" (Codinorm).

2.2. Establishment of the national coordinating committee within the framework of the project

The creation of a national committee of about 20 members was proposed: a national coordinator, a national secretary, a representative of the Prime Minister, one representative per department involved (11), a Codinorm representative, a representative of the Chamber of Commerce and a representative of small and medium-sized enterprises and industries, a representative of consumers, and a representative of the Union of Cities and Municipalities of Côte d'Ivoire. The selection of members was made on the basis of hierarchical and technical position in order to facilitate decision-making and follow-up of actions. This committee was responsible for crisis management. This coordinating committee managed the work of the committee of experts by drawing up invitations, paying expenses, drafting the reports of meetings, advising the corresponding ministry, liaising with industry.

2.3. Creation of a committee of national experts

The committee of national experts was set up after a call for candidates in several Ivorian newspapers. Approximately fifty candidates were dealt with by the 3CI project management team to select only 15 experts based on their curriculum vitae, taking into account the multidisciplinarity (microbiology, toxicology, food chemistry, biochemistry, medicine ...). These experts carried out a collective assessment of health hazards in order to inform managers of the risks associated with these hazards and to recommend actions to minimize their impact for the consumer.

2.4. Implementation of a national health surveillance system

Food analysis units/laboratories were upgraded into equipment, analytical procedures, trained personnel. Consumption surveys were conducted among 1003 households for their daily food consumption. A total of 2700 samples (water, meat, fish, rice, maize, etc.) taken from markets in the cities of Abidjan, Bouaké, Yamoussoukro, Daloa, Korhogo and Abengourou were subjected to conventional microbiological analysis. Also multi-mycotoxin analysis (total 79) were carried out by liquid chromatography coupled with mass/mass spectrometry (LC-MS/MS) at Queen's University Belfast on 238 samples collected: 88 rice samples including 47 local rices and 41 imported rices, 79 corn samples including 29 crushed maizes and 50 maize flours, and 71 samples of groundnut paste.

2.5. Study to establish a safety quality label

A diagnosis of the existing quality labels in Ivory Coast and similar experiences in Ghana was carried out. The opportunity to implement a safety quality label in support of the agricultural and agro-food sectors in Ivory Coast was studied by conducting a series of surveys and interviews at the ICC, the Ivorian Industrial Property Office (OIPI), Codinorm and three major food cooperatives (Association for the Development of Intensive Food Crops [ADCVI], National Confederation of vegetables producers [CNAVICI], National Federation of Food Cooperatives [FENACOVICI]).

3. Results

3.1. Diagnose the difficulties of application of the regulation

Ivory Coast has adopted legislative and regulatory provisions that provide the legal basis for food safety, with a view to protect consumers while ensuring the quality of imported, exported and locally consumed food products. It has more than 200 standards for agricultural and food products (Table 1). They are developed by Codinorm. The proposed standards are adopted by technical committees composed of representatives of the administration,

Table 1
Classification of the main standards for agricultural products and foodstuffs in Ivory Coast.

Categories	Number of norms	Years of publication
Total Vegetable Productions	**69**	
Generalities	3	1989(1), 1993(2)
Stimulants and Derivatives	15	1985(8), 1989(5) 2006 (02)
Fresh Fruits and Derivatives	13	1989(7), 1993(4), 2009 (02)
Fresh Vegetables and Derivatives	15	1989(14) 1993 (1)
Seeds and oilseeds	11	1993(11)
Cereals and leguminous plants	12	1993(11) 1995 (1)
Total Animal Productions	**21**	
Fishing Products	10	1993(8), 2001(1), 2002(1)
Meat and meat products	11	1990(9), 1993(2)
Total food Industries	**81**	
Generalities	10	1989(8), 1995(1), 2001(1)
Milk and dairy products	34	1993(26), 2001(6), 2002(2)
Drinks	25	1993(4), 2001(5), 2002(3) 2008 (13)
Flours and starches	9	1995(8) 2007 (1)
Food Additives (Salt)	3	2001(1), 2002(2)

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