



Editorial

By Mamadou Alimou BARRY

Dear Readers,

As usual, the seventh edition of the quarterly newsletter on agriculture and biotechnology «DABA» deals with topical news of a great concern to rural actors. All the way through its different sections, the Editorial Committee attempts to spark off a debate on subjects and issues identified in consultation with grassroots actors in order to engage in critical and objective debate on issues related to agriculture.

Biotechnology has registered a rapid growth since its integration into farming in a few years. Transgenic-crop producing countries like Brazil, Argentina, India and China, have thus become big agricultural powers thanks partly to GMOs. The adoption of biotechnology has enabled the above-mentioned countries to position themselves on the world market of agricultural products. Therefore, the section «Behind the scene» deals with the role and position of GMOs in the development of agriculture in emerging countries.

In this tenth issue, the results of the debriefing workshop related to the regional study on the involvement of rural actors in the definition of agricultural public policies are reported. This crucial question for the development of agriculture, in regards to the importance of consultations in the drawing up, implementation, monitoring and evaluation of public policies is discussed in «Breaking news». During two days of deliberations, the participants talked about the stakes and structuring challenges relating to the participation of rural actors in meetings. Its purpose was to find the ways, means and mechanisms that can ensure their effective and

qualitative participation in consultative, exchange and decision-making bodies for an inclusive drawing up of farming policies.

As part of the same dynamics, the Editorial Committee has devoted an article to the lingering land issue. Therefore, in «Cross perspectives», the issue of access and land securing is put in parallel with the objectives assigned to the different agricultural policies, the first of which is the achievement of food security.

To provide an answer to the farming difficulties that prevail in the Wca area, «Alternatives» sheds light on an innovative production system known as Conservation Agriculture. This production mode is based on three advantageous principles from an environmental and socio-economic point of view.

In this second quarterly edition, the Agripol section of Enda Diapol has interviewed Pr. Chantal Yvette Zoungrana, Director of the National Bio-security Agency (Anb) of Burkina Faso. In «Testimony», she answers questions related to the issue of the introduction of biotechnology into agriculture without concealing the question of bio-security.

To end this edition, the Editorial Committee has devoted one article under the heading «Focus on», to the Western and Central African Council for Agricultural Research and Development (Coraf), an organization which is specialized in agronomical research in Africa. Coraf's headquarters is based in Dakar. It comprises more than twenty Research Centers and Institutes in Wca countries.

Enjoy your newsletter!

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INTRODUCING GMOs INTO AGRICULTURE

An innovation that supports the development of emerging countries

In the space of a few years, Brazil, India and China have become emerging powers. As « new giants », they have become actors that cannot be ignored on the international scene. A new status they have acquired thanks partly to the reforms they have undertaken in sectors such as technological development and agricultural research.



Thanks to the reforms implemented in different fields and particularly in agriculture, countries like Brazil, India and China are about to meet a major challenge: matching supply and demand in terms of food products. The introduction and development of biotechnology in the agriculture of these countries have contributed significantly to this success.

Today, Brazil, China and India are considered true agricultural powers in terms of production and export and will play a major role in tomorrow's agriculture alongside the traditional actors who are the United States of America and Europe. The agricultural products from these countries will contribute significantly to the fight against hunger in the world. The adoption and marketing of this technology is common to them. As soon as the emergence of this technology, these two countries did their best to acquire the human, material, financial and institutional means in order to be able to adopt this technological innovation.

As an illustration, the example of India is quite enlightening. Within ten years, India has become the second largest world cotton producer and third greatest cotton exporter thanks to transgenic cotton. This variety represents about 87% of land sown with cotton.

Subsequently, Indians have introduced transgenic aubergine while continuing research on other subsistence crops (rice, maize, wheat, etc.).

As far as Brazil is concerned, it is important to note that out of twenty eight (28) genetically modified varieties, only three crops: soybeans (it accounts for 3/4), maize and cotton have been authorized. At the same time, India has approved the use of ten vaccines produced by genetic engineering intended for animal use, and one yeast called (*Saccharomyces cerevisiae*) for bio-fuel production, from sugar cane residues. Yet, for the 2005-2009 period, Brazil authorized only two GMO varieties. But in 2009, India became the second world's largest producer of transgenic plants with 21,4 millions ha.

Having belonged since 1997 to the pioneers in terms of adoption and promotion of GMOs, China has been consolidating its position and remains among world leaders in this field (ranking 6th worldwide). In 2009, the Chinese allocated 3,4 millions ha to the following transgenic crops: cotton, tomato, sweet pepper and poplar. Today, this surface area is continuously rising as last year, rice and transgenic maize marketing was approved.

In addition, it can be noted that Brazil, China and India play a major

role in world production of food products, including the following core crops: wheat, maize and rice. China and India are the world's largest producers of wheat and rice and they were, along with Brazil, among the five largest maize producers in 2008. Maize and transgenic rice are produced in Brazil and China. India is also developing its research on these crops.

Therefore, it can be said that Africa has completely failed to benefit from the green revolution. Biotechnology, in spite of some known risks, offers many important possibilities for the development of the agricultural sector. But will it be able to produce the same results in Africa and enable the continent to catch up? This is the formidable question which the advocates and opponents of this technology must answer.

Abdoulaye KONÉ

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DEFINITION OF DEVELOPMENT POLICIES DESIGNED FOR THE SUBSISTENCE CROPS SECTOR

Enda Diapol and Frao advocate the involvement of rural actors

The West Africa Rural Foundation (Frao) organized, from May 12 to 13, 2011 in Dakar, a workshop whose theme was: « the involvement of rural actors in the definition of development policies for the subsistence crops sector ». Among the participants, a few important beneficiaries of the Fida projects/programs in Western and Central Africa, as well as the representatives of farmers' associations like Roppa (Network of Farmers and Agricultural Producers Organisations) and Propac (Sub-regional Platform of Central Africa Farmers' Organisations).



«How to promote the knowledge and experiences of farmers' associations and other actors from the subsistence crops sector in the definition and drawing-up of public policies for the sustainable development of the subsistence crops' sector (cereals, tuber and roots) in Western and Central Africa (Wca)? » This was the question fifteen participants from Cameroon, Democratic Republic of Congo, Mali, Ghana, Senegal and Guinea attempted to answer. It was during a workshop held on May 12 and 13, 2011 in Dakar. It was an opportunity for Enda Diapol to introduce the results of the study on the theme: «the involvement of rural actors in the definition of development policies regarding subsistence crops ».

First of all, the objective of the study was to identify and characterize in targeted countries (Mali, Senegal and Cameroon), the consultation mechanisms; secondly, to assess the potential of the contribution of Fida's projects in terms of information for

improvement of the policies in Wca; and thirdly, to propose support strategies in order to upgrade the quality of the consultation on public policies, with a greater involvement of actors as well as the availability and accessibility of information.

In order to reach these objectives and facilitate understanding, the main issues and challenges connected to the participation of the rural people in the consultation and decision-making process were reviewed. In this respect, Enda Diapol put an emphasis on the different existing relationships (alliance, partnership, opposition, domination, etc) between the farmers organizations and other actors (State, Ptf, private individuals, traders, transporters, Ngo, etc). This approach allowed the identification of challenges linked to the participation of the rural populations namely the most disadvantaged ones, in the consultation process. Among those challenges, one can name the following: professionalism, setting

up and running consultation frameworks, political cohesion and the drawing up of more equitable land laws.

These challenges were identified as being conditions sine qua non for the participation of the associations of farmers in the exchange and consultation process; among other things, to enable these associations to better face up to the challenges relating to access to land, inputs, agricultural equipment and credit, markets as well as strategies to boost production and revenue. As far as the challenges are concerned, Enda Diapol identified the priority needs for an adequate granting of benefits. This will be done thanks to a clear approach accessible to rural actors. This contributed to the emergence of two thematic groups with distinct themes: to draw up a policy paper aimed at reinforcing the capacities of rural actors so that they can participate in a qualitative manner to the formulation, implementation, monitoring and assessment of the public policies regarding subsistence crops in Wca.

It must be noted that the purpose of Enda Diapol was to report back during this workshop and play an active role in facilitating the political dialogue around social, economic and political rights in order to broaden the social base in the drawing up of public policies.

Abdoulaye KONÉ

● Cross-perspectives

LAND LEGISLATION IN WEST AFRICA

Land management, a prerequisite for food security

Within a context of food insecurity and resurgence of conflicts relating to the access or exploitation of land, land issues are at the centre of development policies. That is why most West African States have undertaken either the drawing up of land policies or the adoption or enforcement of their land legislation.



When you are facing a soaring demography, optimizing the farming of arable land towards food sovereignty and poverty reduction becomes a crucial task. In West Africa, land management, which used to be characterized by an authoritarian management and centralized system inherited from colonization, should be transparent and rest on good

governance. However, important advances have been made, resulted in a concerted and decentralized management effort. That is why the majority of these countries have undertaken a review of their land legislation, while others have passed an Agricultural Policy Act (Loa).

Determined to work for the reduction of poverty and food security, African states agreed in

2006 to implement a joint initiative on land policies in Africa. The objective was the drawing up of efficient and effective land policies at the national level. Various perspectives led to the formulation of a document entitled: Framework and guiding principle on land policies in Africa. It recommends the following: the necessity of better

documenting the processes of policymaking, a wide-ranging debate on cross-border resources, the inclusion of regional initiatives, and the planned establishment of a land watchdog committed to West Africa.

Due to land-related tensions, contradictions between modern, customary and religious rights led to legal confusion. The choice of social governance at local levels and the promotion of family farming require the drawing up of concerted land policies. Furthermore, in order to guarantee access for rural populations to agricultural land and promote food security, land legislations must take into account the resolution of a certain number of problems. They include State monopoly on lands, insecure customary land rights, development of land markets and the issue of bio-fuels. The latter represents a serious hindrance for the countries, since large areas of land are devoted to this export crop to the detriment of



subsistence agriculture. The following can also be added: major constraints such as financing the drawing up and implementation of land policies, an increase in land conflicts (farmers/cattle herders), zoning issues and urban sustainable development.

Are land policies in line with agricultural policies? Can we advocate food sovereignty on the one hand and, on the other, give lands to multinational companies and industrialists for bio-fuel production? It points to the need for consultation and the involvement of the different actors in the drawing up and implementation of public land and agricultural policies. As a

matter of fact, Senegal can be quoted as an example for having drawn up a land occupation plan in the River Senegal Valley and the involvement of Regional Councils in land management in the groundnut basin. How can the securing of land to rural actors be guaranteed? The main challenge, here, is to ensure for rural actors legal protection regarding their Rights (easier access to land titles or lease, the recognition of land for cattle-breeders etc.).

In order to meet the food needs of its population, Africa must significantly increase its agricultural production. Due to the fact that land is not a renewable resource, land legislation must ensure its permanence for future generations, all that for the sake of sustainable development. Consequently, we are indebted to those future generations for, according to Saint-Exupery: *«We do not inherit our parents' land; rather, we borrow it from our children»*.

W. Karine Raïssa OUÉDRAOGO



● Alternatives

CONSERVATION AGRICULTURE

A summary of sustainable and profitable agricultural systems

To address the difficulties that undermine African agriculture, namely environmental problems, sustainable management of the lands and low yields, among others, Conservation Agriculture can be seen as an alternative. Quite widespread in East and South Africa, this form of agriculture is a real opportunity for the small producers of Wca.

Combining agricultural production, improvement of the living condition and protection of the environment according to FAO, Conservation Agriculture is a combination of three principles. First of all, it deals with crop associations and rotations; secondly, with minimum land use; and thirdly, with sustainable land management.

The principle of crop association and rotation consists in covering and protecting land against weather effects thanks to rotations. The objective is to protect and develop the structure of the soil with roots from crops and inter-crops. As far as the principle of minimal soil work is concerned, when you gradually reduce soil exploitation and land work down to «direct sowings», it allows reducing the number of interventions and the consumption of humus. It boosts the natural reorganization of the soil while significantly reducing water pollution. Sustainable soil management, which consists in restoring all crop residues on to the surface of the soil in order to protect it from the sun, wind and rain, enables farmers to keep the soil's humus, thus its fertility.

Is Conservation Agriculture therefore the answer, no matter the type of farm and agro-ecological environment? From an environmental standpoint, the advantages of such a practice are enormous. They are as follows: retention of carbon in the soil, more efficient use of water and improvement of biodiversity, among others. From an economic standpoint, Conservation Agriculture can be quite profitable. In addition to allowing the securing and improvement of yields, it promotes the reduction of weeding cost and the saving of working time; thus contributing to food security, which is why, according to FAO «*Conservation Agriculture is a substitute for traditional field work*», which is the main cause of erosion and deforestation on numerous farms.

Even if the efficiency of this type of agriculture is not unanimously accepted, yet, farmers who have adopted it for several years attribute to it the reduction of weeds and diseases; an improvement of the soil structure; yield stability and a reduction of the necessary labour. With a view to reaching a sustainable agriculture, the 5th World



Congress on Conservation Agriculture, planned for September 26 to 29, 2011 in Australia will be an opportunity to study the possibilities of a massive adoption of efficient and profitable farming systems in order to meet the current challenges of African agriculture.

Thus, Conservation Agriculture presents many agronomical, environmental and socio-economic advantages which must be exploited for the benefit of Wca producers. Nevertheless, the promotion of this type of agriculture will necessitate the provision of tools and support that will enable the producers to integrate its principles into their operating systems.

W. Karine Raïssa OUÉDRAOGO



PR. CHANTAL YVETTE ZOUNGRANA, BURKINA FASO NATIONAL AGENCY OF BIO-SECURITY DIRECTOR (ANB)

«We have no prerequisite regarding a possible extension of technology to subsistence crops»

As the Director of the National Biodiversity Agency (Anb) of Burkina Faso after having been the Chairperson of the National Scientific Committee on Biodiversity (Csnb), Pr. Chantal Yvette Zoungrana Kabore holds a PhD degree in Nutrition from Université de Paris VI, and another PhD in Natural Science from the Université de Ouagadougou. She has received distinctions including Chevalier de l'Ordre des Palmes Académiques of Burkina Faso, the Chevalier de l'Ordre International des Palmes Académiques du Cames, the Chevalier de l'Ordre National. In this interview, the Director of the Laboratory for Studies and Research on Natural Resources and Environmental Sciences (Lernse) talks at length about the issue of bio-diversity in Burkina Faso.



DABA: How do you assess the results reached so far after the introduction of Bt cotton into Burkina Faso?

Pr. Chantal Y. Zoungrana:

The assessment we can make today is based on the four experimental years of Bt cotton growing, and three years of marketing with the following varieties: FK37BGII and STAM59ABGII. For the time being, in terms of production, the yields have improved a lot. However, it must be noted that the forecast level of production can only be achieved when the technical requirements are followed. Such is not always the case with the farmers concerning large-scale cultivation. A technology will prove its real worth only if it is well mastered. As far as our agency is concerned, we have just requested a thorough socio-economic study of this technology in relation to the farming world; it will take into account the productivity component, plus sociological aspects which are so important. At the end of the scientific analysis, we will be able to make a real assessment of the development of this technology.

What are the opportunities and potential risks connected to the introduction of biotechnology into the cotton sector?

The opportunities have been evaluated in terms of advantages starting from the four years of trial for Bt cotton. They are expressed in terms of production growth as well as time gain, and the amount of labor devoted to spraying, reduction of the impact of pesticides use on human health and on our environment.

The potential risks associated with this technology are those for which we have imposed bio-security measures. They are namely: contamination by the Bt gene of the non transgenic cotton crops that coexist within the same spaces; hence the need for strict compliance with distances between plants. The other risk is the appearance of resistant insects. Refuge areas are indispensable in order to tackle this. They have also been recommended and researchers are trying to find crops which can serve as substitutes for cotton and that could generate more revenue for producers.

What is collaboration like between Monsanto and the Republic of Burkina Faso?

Monsanto, the holder of the technology is the co-owner of Bt cotton with a Burkinabe consortium. So, it submits to Anb applications and must, in return, comply with the demands connected to implementation. At this level, compliance is respected. We are sensitive to the effort made by the company in order to carry out its obligations and abide by the imposed requirements. But we can say that certain aspects can still be improved.

What are the results and prospects of the trial of the two new varieties of Monsanto, you authorized in July 2010?

You are right. Two varieties of cotton tolerant to herbicides (FK37RRF and FK37RRFBGII) had been authorized for trials for the 2010-2011 campaign on behalf of Monsanto. After one year's

experimentation, the company has submitted a new request to carry on the trials. The results obtained are only partial ones. We will follow the same procedure as with Bt cotton which is resistant to certain bollworms insects and leaf-eating insects of the cotton plant. A series of experimentations that will enable us to ensure that potential risks on environment, human and animal health, if there are any, will be carried out. When all this will have been conclusive, we will move to the socio-economic evaluation before one decision to put it or not into the environment is taken.

Can we foresee the extension of new technologies to subsistence crops?

Our country has freely adopted this new technology in order to make the most of it. In Burkina Faso, prospects concerning biotechnology are clearly stated in the related regulations; Article 30 requires that, before adoption, we ensure that the technology participates in sustainable development; is beneficial to the country and environment; does not harm the socio-economic environment and is not contrary to ethical rules. Subsistence crops are no exception to that rule. The evaluation of risks and the enforcement of this article will tell us if they can be disseminated. Therefore, Anb does not have any objection to a possible extension of the regulations to subsistence crops, provided that we comply with such regulations and leave the consumer free with his choice. By the way, authorization has been given regarding trials with biodiversity greenhouses to start next

season on Bt bean and on strengthened bio sorghum.

What are the difficulties confronting Anb in carrying out its mission?

The difficulties are the ones that any regulation system can be subjected to, namely nation-wide control of enacted measures. That is why we think that it is necessary to help actors see the reason behind these measures. Furthermore, we have an on-going need for capacity building at the national level due to the rapid development of this technology. Finally, we need our populations' trust in our agency which can only be achieved through a transparent explanation of how decisions are taken.

In regards to Ecowas' position on biotechnology, what are the best regional control mechanisms that could be useful in order to complete the national Burkinabe framework?

We are currently working under in a sub-regional initiative that we have started with Uemoa within the framework of the Western African Regional Bio-security Program (Prbao). And we are now supposed to go ahead with three institutions (Cedeao/Uemoa/Cilss) in order to develop one common sub-regional regulation in process. The final document should, I think, be a minimal base that would allow the regulation of GMO within our organism. It is up to countries to be more demanding on certain aspects. In all cases, we should take into account the advances and experiences of different countries in terms of biotechnology and bio-security. We hope to reach a consensus that would allow a greater consideration regarding the concerns of each State for the sake of our populations.

How can Ecowas promote Burkinabe expertise in favor of other member countries?

Burkinabe expertise does exist in fields like experimentation, risks evaluation, communication, regulation etc. and we are ready to share it with those who would express a need for it and in a way we will all deem more appropriate. We are willing to intervene everywhere the need will be.

**Interviewed by
Abdoulaye KONÉ**

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FOCUS ON...

THE WESTERN AND CENTRAL AFRICAN COUNCIL FOR RESEARCH AND AGRICULTURAL DEVELOPMENT (CORAF)

Agricultural research for the sake of African integration

Created in 1987, CORAF (Western and Central African Council for Research and Agricultural Development), formerly called « Conference of African and French Leaders for Agricultural Research», is the fruit of a partnership between research institutions in fifteen francophone countries of Western and Central Africa (Wca) and three French institutions (Cirad, Inra and Orstom).

Over the years, Coraf has positioned itself as a sub-regional organization whose mission is to facilitate the development and implementation of projects and research programs related to agriculture. This positioning resulted in the entry of institutions and research centres in Portuguese and English-speaking countries; namely, Ghana, The Gambia, Sierra-Leone, Cape Verde and Guinea Bissau. The integration of these countries has also been accompanied by a change of name. That is how Coraf has become the « Conference of African and French Leaders for Agricultural Research ». One had to wait until the year 1999 before it became the « Western and Central African Council for Research and Agricultural Development », its current name.

This was followed by the adoption of a new approach known as Integrated Agricultural Research for Development or IAR4D. It consists in a participative approach which involves all actors of the agricultural sector (Universities, Research Centers/Institutions, Private Sector, Civil Society, etc.) ranging from the identification of research constraints and priorities to the marketing of agricultural products, through baseline studies; the design and implementation of projects/programs, training, incubation, evaluation, etc.

Since its creation, Coraf's mission has been to improve, in a sustainable manner, productivity, competitiveness and agricultural markets of



Western and Central Africa through efficient agricultural research that meets the real needs of the people living in rural areas. To achieve that, it adopted its first strategic plan based on programs that help achieve the same global objectives. After the implementation of the first phase of the strategic plan, Coraf members decided to amend the first version in order to integrate the main features of the different policies made at both regional and institutional levels. That includes the Detailed program for the Development of Agriculture in Africa (Pddaa), the objectives of regional economic communities (Ecowap) and principles of the Framework for agricultural productivity in Africa (Faap). This is done mainly to comply with conditions surrounding policy-making. This is how a new strategic plan spanning the 2007-2016 period was launched with the objective of contributing to a sustainable reduction of poverty and food insecurity in Western and Central Africa through participative research intended for the people living in rural areas.

Mamadou Alimou BARRY