



# G2012 MÉXICO

G20 BOOKLETS

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FOOD SECURITY:

A G20 PRIORITY

THE INPUT OF MEXICAN EXPERIENCES

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**FOOD SECURITY:  
A G20 PRIORITY  
THE INPUT OF MEXICO'S EXPERIENCES**

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Food Security: a G20 Priority

Mariano Ruiz-Funes Macedo and Kenneth Smith Ramos | Sagarpa

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# FOOD SECURITY: A G20 PRIORITY

Mariano Ruiz-Funes Macedo and Kenneth Smith Ramos\*

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## INTRODUCTION

Ever since the so-called 2008 “food crisis” occurred, the agricultural and fisheries sectors became relevant to the G20 discussions<sup>1</sup> due to several countries' increased interest in adopting measures to address agricultural product price volatility and increase food security, the latter defined not only as an increase in production, but also the availability of, and access to, food by the population. This G20 concern increased in late 2010 and early 2011 as a result of a new period of volatility in *commodity* prices. For this reason, in June 2011 the ministers of agriculture of the G20 member countries agreed to an ambitious Action Plan on Food Price Volatility and Agriculture<sup>2</sup> with specific measures in the areas of research, information, risk management, investment, sustainability and training.

In December 2011, Mexico took over the G20 presidency with the challenge of consolidating the Action Plan strategies and defining priorities for the agricultural and fisheries agenda. In this regard, it is foreseeable that the Group's efforts will focus on the definition and implementation of long-term policies to promote a sustained increase of agricultural and fisheries productivity, with the aim of mitigating the problems faced by the sector worldwide.

The objective of this document is to provide a brief summary of the G20 objectives and achievements in the fields of agriculture and fisheries during 2012, and outline some of the strategies to be promoted by the G20 Mexican presidency.

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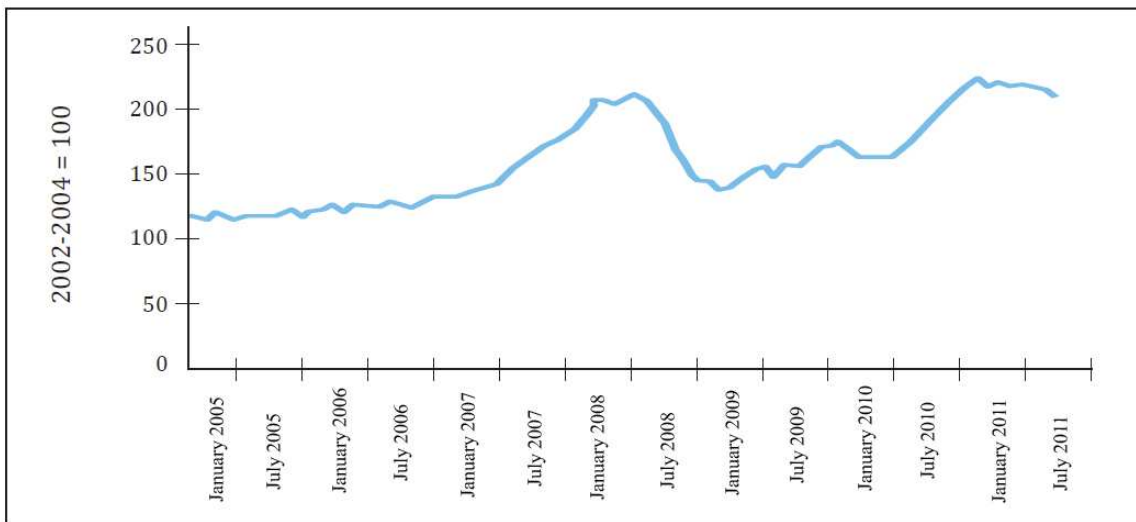
<sup>1</sup> The G20 countries account for 85 percent of the global economy and two thirds of the world population. They are: Saudi Arabia, Germany, Argentina, Australia, Brazil, Canada, Korea, China, the United States of America, France, India, Indonesia, Italy, Japan, Mexico, United Kingdom, Russia, South Africa, Turkey and the European Union. Spain participates as a permanent guest.

<sup>2</sup> Meeting of G20 Ministers of Agriculture in Paris, France, June 22 and 23, 2011, at [http://agriculture.gouv.fr/IMG/pdf/2011-06-23\\_-\\_Action\\_Plan\\_-\\_VFinale.pdf](http://agriculture.gouv.fr/IMG/pdf/2011-06-23_-_Action_Plan_-_VFinale.pdf)

## AGRICULTURAL AND FISHERIES ISSUES AT THE G20

After one decade of stability in global food markets, the period after 2007 was marked by an ongoing increase in prices for the main agricultural products. The international food price index, which is tracked by the Food and Agriculture Organization of the United Nations (FAO), increased by 55.3% between September 2007 and September 2011 (see Graph 1).

**GRAPH 1**  
**FAO Food Price Index**



Source: FAO, 2011

This increase basically occurred in two periods. The first was that of 2007 and the first quarter of 2008, when the food index increased by 61.6%. The world financial crisis and the subsequent reduction in aggregated demand led to a reduction in food prices compared to that period, but food price levels remained above those before 2007. The second food price increase period occurred between July 2010 and February 2011, when the index increased by 41.4%.

While episodes of relatively high prices are not an unusual phenomenon in food markets, they are typically short-term periods usually caused by disruptions in the supply, which are in turn associated with the impact of adverse climate conditions in specific countries and periods. What

distinguishes the current situation from that in recent years is the persistent increases in high food price absolute levels, and especially their volatility perspectives.

The effect of agricultural product high prices has spread relatively rapidly to other sectors of the economy through the added value chain, a situation that has led to consumer price increases for a series of basic products in several countries, especially those made from corn, wheat, meat and dairies. Consequently, food price increases have, once again, become a global inflationary pressure factor with a particular impact on low-income population segments.

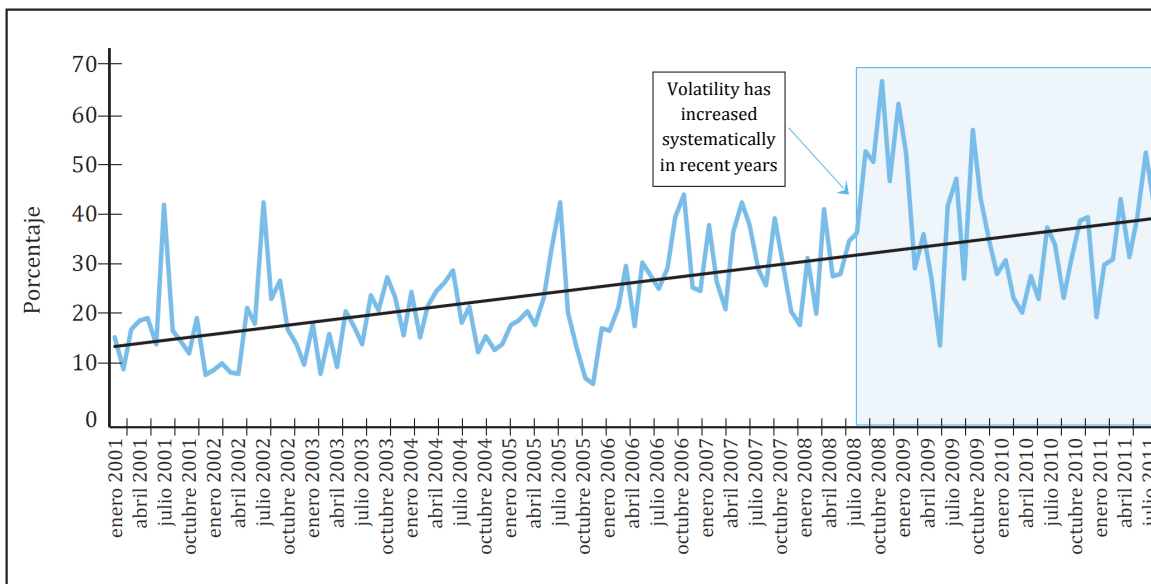
Several studies (Trostle, 2008; Mitchell, 2008; Headey and Fan, 2008; Rossett, 2008; Elliott, 2008) conclude that the main causes of price increases in agricultural products are:

- The world's economic growth, especially in emerging countries such as China and India.
- An increase in the per capita consumption of meat and dairy products, the production of which requires an intensive use of feed grains.
- The reduction of the agricultural product inventory.
- The dollar devaluation.
- The expansion of biofuel production in Europe and the United States.
- "Panic" buying by some importing countries.
- The reallocation of investment portfolios to raw materials future markets, in many cases with speculative purposes.
- A slowdown in the growth of global agricultural production.
- The conversion of productive land for use in non-agricultural activities.
- The increase in water opportunity cost.
- Adverse weather phenomena in major production regions caused by climate change.
- Export restrictions imposed by major producer countries in certain periods.
- The rise in price of oil and other fuels, which increases agricultural production costs.

Considering all population growth forecasts point to an increase in food demand in the coming years, the challenge for farmers lies in increasing the supply rapidly and efficiently. However, this process has been

hindered by high price volatility. Price variations in the most representative products, such as corn and wheat, have increased in recent years (see Graph 2).

**GRAPH 2**  
**Chicago corn control quotes**



Source: Chicago Mercantile Exchange Group.

At the same time, the future behavior of prices is becoming uncertain, a situation that increases risks for farmers and inhibits investments. Despite the existence of financial mechanisms to manage risks associated with price variations, it is difficult to confirm if these reflect the market fundamental supply and demand conditions, or they are the result of reallocation of investors' asset portfolios in international markets, particularly investment funds, which after the 2007 mortgage crisis have found an appealing instrument in agricultural products.



## OBJECTIVES AND ACHIEVEMENTS OF THE ACTION PLAN ON FOOD PRICE VOLATILITY AND AGRICULTURE

In response to the situation of world food markets, in June 2011 the ministers of agriculture of the G20 member countries agreed to an Action Plan on Food Price Volatility and Agriculture. The Action Plan recognizes that food security will continue to be a critical issue worldwide. It also stresses the need to implement more efficient agricultural policies, both on the global and local levels, increase international coordination, and implement specific measures to promote food security and sustainable agricultural production.

The Plan focuses on the challenges to increase food production and reduce price volatility, mainly through an increase in productivity, better market information systems, increased trade openness and sustainable agricultural, rural development and investment policies. This can be summarized in its five strategic objectives:

### 1. IMPROVE AGRICULTURAL PRODUCTION AND PRODUCTIVITY BOTH IN THE SHORT AND LONG TERM IN ORDER TO RESPOND TO A GROWING DEMAND FOR AGRICULTURAL COMMODITIES.

In this strategic area, countries committed to implementing measures to promote agricultural growth, with a focus on smallholders, especially women and young farmers in developing countries.

An agreement was reached to strengthen agricultural research and innovation through national research bodies, the Consultative Group on International Agricultural Research (CGIAR) and the Global Forum on Agricultural Research (GFAR). The decision was also made to adopt the “Montpellier Road Map”, one of the outputs of the 2010 Global Conference on Agricultural Research for Development (GCARD). It also highlights the importance of promoting technology transfer, knowledge dissemination and training through cooperation initiatives. One initial step outlined in the Action Plan is the Initiative for Wheat Improvement launched in mid 2011.

The Plan also highlights the member countries' commitment to create an appropriate environment to promote public and private investments in agriculture. Countries, international organizations and the private sector are also encouraged to invest in agricultural sectors in developing countries.

In the areas of human health, animal health and sanitation, the Plan recognizes the importance of strengthening international and regional networks, considering these have the capacity to ensure the early detection of pests and diseases, facilitate trade and contribute to food security.

## 2. INCREASE MARKET INFORMATION AND TRANSPARENCY IN ORDER TO BETTER ANCHOR EXPECTATIONS FROM GOVERNMENTS AND ECONOMIC OPERATORS

With the cooperation of international organizations such as the World Bank, FAO and the Organization for Economic Cooperation and Development (OECD), the Agricultural Market Information System (AMIS) was launched in September 2011.

AMIS will increase transparency and information on production, inventories, trade, consumption and agricultural prices for four crops essential to global food security –wheat, rice, corn and soy. It also seeks to promote a global vision among those responsible for the world's agricultural policy and facilitate the exchange of information, policy dialogue and cooperation.

AMIS will be coordinated by FAO and the international Grains Council (IGC). At the same time, the Global Geo-Monitoring Initiative will serve as an AMIS tool for more accurate production forecasts.

### 3. STRENGTHEN INTERNATIONAL POLICY COORDINATION IN ORDER TO ENHANCE CONFIDENCE IN INTERNATIONAL MARKETS AND TO PREVENT AND RESPOND TO FOOD MARKET CRISES MORE EFFICIENTLY.

In this section, the Action Plan recognizes the role played by the United Nations Organization (ONU), particularly FAO, in the global food security governance architecture. The Rapid Response Forum, which is made up of officers from the ministries of agriculture of the G20 countries, was created in the context of AMIS with the aim of exchanging views, taking immediate actions and preventing or mitigating global food price crises.

It also recognizes the importance of a stable, predictable and distortion-free trading system through the World Trade Organization (WTO) and its different agreements, such as that on the application of sanitary and phytosanitary measures. In this regard, the Action Plan highlights the importance of a rapid conclusion of the Doha Round.

Another important aspect is the agreement to eliminate food import restrictions for imports made with non-commercial humanitarian purposes by the World Food Program (WFP).

As far as biofuels are concerned, the Action Plan recognizes the need for further analysis to determine the relationships between biofuel production and food availability, price increases and their volatility, and the sustainability of agricultural production.

### 4. IMPROVE AND DEVELOP RISK MANAGEMENT TOOLS FOR GOVERNMENTS, FIRMS AND FARMERS, IN ORDER TO BUILD CAPACITY TO MANAGE AND MITIGATE RISKS ASSOCIATED WITH PRICE VOLATILITY,

The G20 countries recognize the effects of price volatility on the development of agriculture and food security. In this regard, the Plan stresses the importance of "safety networks" to mitigate the effects of price volatility. It supports the idea that individual countries, depending on their particular situation, can apply preventive measures to reduce the impact of "economic and climatic shocks" on households. These measures may include price hedging, insurance, contract farming, guarantee instruments and counter-cyclical loans, among others.

Training and technical support are key elements, considering the Action Plan urges banks, agencies and international organizations to help developing countries integrate risk management into their agricultural policies.

The Action Plan supports the creation of a humanitarian emergency reserves system. To this end, the WFP was requested to conduct a feasibility and cost-benefit study to develop a pilot project for this system. The Plan also invites interested organizations to develop a code of conduct for responsible emergency food reserves management, mainly consisting of voluntary principles and good practices.

## 5. IMPROVE THE FUNCTIONING OF AGRICULTURAL COMMODITIES' DERIVATIVE MARKETS.

The general idea of the G20 members is to introduce a series of reforms into the financial system. The Financial Stability Board released an initial list of financial institutions that will be subject to oversight in order to improve the functioning of financial markets. The International Organization of Securities Commissions will evaluate the integrity and efficacy of financial markets with the aim of improving the functioning and transparency of agricultural commodities financial markets. In November 2011, at the G20 Summit held in Cannes, France, a multilateral agreement was signed to provide administrative assistance on fiscal matters to Member Countries.

The G20 agricultural agenda is broad. The challenge for Mexico not only lies in implementing it and making progress in 2012, but also setting clear priorities so the Action Plan is feasible.

## ELEMENTS FOR THE 2012 STRATEGY AND MEXICO'S EXPERIENCES

Agriculture requires not only short-term public policies to address cyclical problems, but also a vision of the future. The true solution to the problem of food security lies in sustainable and inclusive food production, both in economic and environmental terms, that takes market needs into consideration.

In 2012, Mexico must do a follow-up and, with the G20 members' consensus, seek initiatives to strengthen the Action Plan agreed to last June, which represents an opportunity for the group's member countries, as well as other countries and international organizations, to propose new ideas and make long-term commitments. The elements and experiences Mexico could share in this regard can be grouped in four areas:

- 1) Research, development, innovation and technology transfer, mainly through agricultural extension.
- 2) Investments in the agrifood sector through public-private partnerships and redirecting public investments.
- 3) Sustainability in agriculture.
- 4) Use of risk management instruments to prevent the impact of financial, climatic and sanitary risks.

### 1. RESEARCH, DEVELOPMENT, INNOVATION AND TECHNOLOGY TRANSFER, MAINLY THROUGH AGRICULTURAL EXTENSION

Technological development is a key pillar in the process of addressing the challenges of food security, climate change, and the creation of development opportunities for rural families. Competitiveness is closely linked to research and continuous innovation, and also to knowledge that leads to goods and services with the capacity to meet the needs of a

growing population that increasingly demands healthy, safe and quality products.

The biggest challenge for the G20 lies in the promotion and establishment of national and international partnerships for the development of joint projects between research institutions that can lead to faster responses to global challenges. Another equally important aspect is that of ensuring the use of knowledge as a useful tool for farmers through training, technology transfer and efficient rural extension processes.

In this regard, the G20 recognizes the need to transfer research results and technologies to farmers, and commits itself to increasing international South-South and North-South cooperation, in addition to triangular cooperation and strengthening legal mechanisms for the use of improved plant varieties.

### *Mexico's Experiences*

One of the objectives of Mexico's agricultural and agri-industrial policy is to supply the domestic market with quality, healthy and affordable foods through the development and adoption of new technologies, by linking research to the needs of agricultural and agri-industrial farmers.

To this end, work is being done in two areas. The first involves addressing the research and technology transfer needs of the different links of productive chains, which are outlined in mid-term plans of product-systems and state technological innovation agendas<sup>3</sup>. Farmers have a direct involvement in this strategy through organizations known as *Fundaciones Produce*.<sup>4</sup> The second is that of promoting research in

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<sup>3</sup> The term product-system refers to the group of concurrent agents in agricultural and fisheries productive processes, including suppliers of productive inputs, financial resources, primary production, storage, transformation, distribution and commercialization (Sustainable Rural Development Law, new law published in the *Federal Official Daily Gazette* on December 7, 2001. Current text, last amendment published in the *Federal Official Daily Gazette* on May 26, 2011).

<sup>4</sup> *Fundaciones Produce* are non-profit farmers' associations, fully incorporated and with assets of their own, whose objective is to further the development of agricultural and forest technology in Mexico (Coordinadora Nacional de las

biotechnology, water, genetic resources and climate change, among others.

The Sustainable Modernization of Traditional Agriculture (Masagro) program is an example of coordination of research, technological development and rural extension practices to use knowledge to generate a productive impact on small farmers. Its objective is to achieve a sustainable increase in production and maize and wheat yields, mainly among low-income farmers who practice traditional agriculture in rain-fed areas, through research applied to seed enhancement, with training and technical support.

Masagro is an innovative 10-year strategy with the collaboration of national and international education and research institutions; the federal, state and municipal governments; private firms; the Inter-American Development Bank and the World Bank. The strategy consists of four components:

- *Discovering the genetic diversity of seeds.* Characterize and reveal the genetic potential of collections preserved by the International Wheat and Maize Improvement Center (CIMMYT) (27,000 maize and 150,000 wheat samples), and adapt seeds to the effects of climate change (drought, excess water, pests and diseases).
- *International strategy to raise maize yield potential.* Develop improved seeds appropriate to the different agri-environmental regions to increase average rain-fed maize yields from 2.2 tons/ha to 3.7-4.5 tons/ha over a 10-year period, and strengthen the national seed industry.
- *International strategy to raise wheat yield potential.* Increase national wheat production to 650,000 tons over a 10-year period, an annual 1.5% increase in wheat yield over the next 20 years, and create an international common phylogenetic platform to increase yields.
- *Sustainable development with farmers.* Integrate actors into the productive chain for the development, adaptation and adoption of

sustainable agronomic practices to address regional problems, and provide technical assistance through regional innovation networks to promote the use of conservation agriculture and higher-yield seeds adapted to local conditions.

At present, Mexico has a rural extension strategy that takes into consideration the needs of farmers, organizations and their businesses, with a focus on:

- Promoting training, economic organization and a rural entrepreneurial culture.
- Strengthening leaderships and building technical capacities.
- Educating farmers so they can make a better use of natural resources.

The idea is for "new rural extension strategies" to rely on universities and research institutes in order to improve the cost-benefit relationship and accelerate rural development, the creation of human capital and the development of new technologies.

One of the most outstanding rural extension experiences is that of the Special Programme for Food Security (PESA), which is based on FAO's methodological principles to develop family agriculture in high and very high marginalization rural communities, increase agricultural production, innovate food production systems and promote local markets. Over the course of six years, the program has provided assistance to approximately 810,000 persons in more than 8,000 high and very high marginalization communities.

Another good example is the expert technical assistance model known as Innovation Management Agencies for the Development of Suppliers (AGIDP), which was launched three years ago to establish permanent and self-regulated relationships between farmers and agri-industry suppliers, where agencies can influence aspects related to production, costs and quality.

Another area of research in Mexico is that for the development of biotechnology in agriculture, particularly the use of genetically modified



organisms (GMOs). This area of research has expanded beyond the confines of the scientific lab and the experimental field to commercial crops in 22 countries as a novel form of more efficient production of grains and oilseeds with fewer negative impacts on the environment and direct savings for farmers using it.

Mexico has established a series of precautionary principles in its Genetically Modified Organisms Biosafety Law in order to monitor the development, management, use, mobilization, transport and safe release of 'GMOs and ensure an appropriate level of protection, thus minimizing potential risks to biological diversity and human health. This has led to commercial cotton crops, pilot soy crops and experimental maize crops.

## 2. INVESTMENT IN THE AGRI-FOOD SECTOR THROUGH PUBLIC-PRIVATE PARTNERSHIPS AND REDIRECTING PUBLIC INVESTMENTS.

In the coming years, the growing food demand, in a context where farming areas will not increase significantly, will require additional efforts to increase agricultural productivity levels.

The use of fiscal resources for public activities such as research, sanitation, genetic resources, preservation of land resources and water, public infrastructure (communications, refrigeration and storage networks, among others), information and risk management, will be essential to increase production.

The focus of public investments must shift from the demand to productive investments that promote the integration of productive chains and credit availability.

The establishment of public-private partnerships can direct investments to increase production, productivity, employment and income levels.

### *Mexico's Experiences*

In that context, Mexico is working to identify economic actors in productive processes so they can participate in "Product-System Committees" (agrifood chains), which allows for the definition of

objectives, strategies and common goals to take advantage of opportunities and address problems that limit the performance of value chains.

The strategy includes five stages: 1) creation of committees; 2) definition of the chain's vision and formulation of strategic plans; 3) validation of national plans and their linkages to state plans; 4) consolidation and continuity (implementation of projects established in plans), and 5) professionalization and maturity of committees with an *entrepreneurial* perspective.

At present there are 60 national product-system committees (38 agricultural, 11 on livestock and 11 on fisheries), which account for almost 75% of the total value of domestic primary production, with the participation of suppliers, farmers, marketers and industrialists, as well as different government agencies and academic and research institutions

In addition, in order to promote protected agriculture as a competitive, sustainable and climate change adaptation alternative, in 2009 the government launched the National Protected Agriculture Strategy, which includes four work areas: 1) promote regional development hubs in areas with appropriate productive conditions; 2) promote and strengthen projects linked to domestic, foreign and specialized markets; 3) introduce technologies, training, technical assistance and support services for the different regions and farmer types, and 4) promote mechanisms for the integration and development of actors involved in the value chain.

The implementation of this strategy led to the creation of development hubs appropriate to the climate, socioeconomic and market conditions in different regions of the country, diversification of added value crops, catering to the needs of specialized niches, and the creation of four protected agriculture regional training centers. During the 1980-2011 period, protected agriculture areas increased from 300 to 15,000 hectares, that is, a 13% annual average growth rate.

A strategy has been implemented in the context of public private partnerships to promote flagship crops in tropical regions and funding for productive projects with a captive market. To this end, in 2009 an

innovative operation scheme was introduced under the Humid Tropic Program to combine fiscal incentives with national and international bank and non-bank credits, and guarantee the implementation of comprehensive technological packages and the financial feasibility of projects. To date, 765 projects linked to 16 tropical products, which involve 190,000 farmers in 480,000 hectares, have received support from the program

The World Economic Forum (WEF) promotes the project New Vision for Agriculture, which involves the joint efforts of the public sector, businesses, civil society, international organizations and academic institutions, with three main objectives: food security, environmental sustainability and social and economic development.

The public and private sectors participate in this project with their capacity and experience, and are jointly responsible for setting priorities for the sector and defining the specific measures required to achieve specific goals. In general terms, the strategy includes the implementation of market measures for a better allocation of fiscal resources and attracting private investments.

In May 2011, the Ministry of Agriculture requested Mexico's inclusion in this strategy, Thus, Mexico joined other countries participating in this effort.

The global policy to promote agricultural productivity and sustainability has focused on granting subsidies to make capital available to farmers, including the purchase of machinery and equipment, irrigation technologies and investments in public services. This must be complemented with finance programs that include loan guarantees. One example of this approach is that of redirecting agricultural diesel subsidies to modernize farming machinery, which started in 2011. In addition to generating a positive effect on production, this policy seeks a more efficient use of resources by eliminating market distortions and preserving the environment.

### 3. SUSTAINABILITY IN AGRICULTURE

The sustainable use of natural resources is a key factor in the strategy for the development of the agricultural sector. Today, it is imperative to promote a form of agriculture that is friendly to natural resources –land, water and genetic resources.

Mexico is the world's fourth most megadiverse country. It harbors 10% of the world's known species and ranks first in number of reptiles, second in mammals, fourth in amphibians and fifth in plants. It is also one of the eight centers of origin of edible plants such as avocado, squash, beans, tomato, maize, potato and papaya, among others.

The G20 must become a forum where countries can promote public policies in the field of sustainable agricultural production and establish mechanisms for the market to facilitate the trade of foods grown in sustainable systems, as with organic products.

#### *Mexico's Experiences<*

As far as climate change is concerned, Mexico has established institutional arrangements to address this challenge. The government created an Interagency Commission on Climate Change and launched the 2007-2012 Special Climate Change Programme, where federal agencies and bodies established specific emission reduction goals in their respective sectors, in addition to climate change adaptation measures.

In the case of land and water sustainable use and preservation, participatory planning mechanisms were established with the engagement of target communities. In 2008-2011, this led to the construction of 155 million cubic meters of water storage facilities and 552,000 hectares of land preservation and sustainable practices infrastructure. This has been particularly important in rural territories, considering the effects of droughts and very heavy rains, as well as the erosive effects of climate change in arid and semi-arid regions in Mexico, will only worsen in the future

The diversity of native and local biotypes and varieties is key to promote a broad genetic base that translates into the development of enhanced varieties that allow for the reduction of the negative impacts of pests, diseases and abiotic factors, improving the quality of fresh and process products, and increasing possibilities for global climate change adaptation.

For this reason, in 2011 Mexico established the National Center for Genetic Resources, which has the capacity to preserve more than three million genetic samples in their different forms of reproduction, with the aim of protecting biodiversity, agriculture and food for more than 100 years.

#### 4. USE RISK MANAGEMENT INSTRUMENTS TO PREVENT THE IMPACT OF FINANCIAL, CLIMATE AND SANITARY RISKS.

Climate-related phenomena such as droughts, excessive rainfall, storms and hurricanes are leading to increasing losses in the agricultural sector and markets worldwide, a situation that results in poverty, a negative effect on productive capacities and the use of increasing fiscal resources to address the problem.

For this reason, several country governments, international financial and development organizations such as the World Bank, the Inter-American Institute for Cooperation on Agriculture (IICA) and FAO are promoting mechanisms to address the effects caused by these phenomena. One example is that of crop insurance programs that spread risk, contribute to the survival of the productive, public and financial sectors, and are key poverty mitigation instruments in affected areas.

Another element is that of financial instruments such as price hedging and contract agriculture, which are mechanisms to reduce uncertainty among farmers and buyers resulting from price volatility in agricultural markets.

Information is essential to complement this strategy and anticipate the effects of market risks. The initiative to create the G20 Agricultural Market Information System will be of help in the process of generating reliable, timely and transparent data on the main agricultural products.

The health and safety of agricultural products are key elements of food security and the keys to open markets. Therefore, it is essential to strengthen information and cooperation systems between countries with the aim of maintaining an efficient surveillance system that prevents the introduction and spread of pests and diseases that jeopardize agrifood production and biodiversity.

### *Mexico's Experiences*

Agricultural product price levels and volatility, which are the result of supply-demand imbalances, require the promotion of schemes to mitigate their effects on sellers and buyers.

In response to food price volatility, one market risk hedging instrument implemented in Mexico is that of "contract agriculture" and price hedging for grains and oilseeds. Under contract agriculture, the buyer and the farmer agree a price, which brings certainty to future transactions. With it, the farmer has a prospective sale of its crop and the buyer has access to a safe supply source at a competitive and predetermined price.

Mexico can share its experience in the implementation of catastrophic insurance programs with the G20 countries. Through the natural disaster system of the Risk Management and Prevention Program (CADENA), a national catastrophic insurance strategy with the participation of state governments was implemented in recent years.

This insurance strategy covers territories, instead of individual farmers. This gives farmers with no access to commercial insurance plans an opportunity to access insurance. One of its advantages is its low operating costs and the transfer of risks to international markets. Agricultural catastrophic insurance coverage in Mexico increased from 95,500 hectares in 2004 to more than 8 million hectares in 2011. In this context, the government is also working on a risk atlas to prepare actions to respond to climate-related contingencies associated with the geography of agricultural and fisheries production. Natural factors are unavoidable, but response programs are not. Therefore, the risk atlas must:

cover natural production risks

- a) Climatic
- b) Volcanic
- c) Telluric

cover man-made risks:

- a) Fires
- b) Pollution
- c) Erosion

define indicators:

- a) Warming
- b) Rainfall
- c) Accumulation
- d) Areas affected
- e) Prevalence (by type of phenomenon)

define and standardize the methodology, periodicity and reports.

The opening of new markets increases the risk of new pests, diseases and pollutants entering the country. Therefore, Mexico is working on surveillance, inspection and certification actions and, if necessary, health emergency responses.

The operation of sanitary programs for pest and diseases eradication and control is promoted and supervised with the objective of having low-prevalence or free regions to increase productivity and the quality of products and, thus, facilitate domestic and foreign trade.

One example of the above is the Moscamed (Mediterranean fruit fly) Program, which follows a comprehensive management approach through the use of the sterile insect technique, traps and environmentally friendly products. The program operates mainly in the Mexico-Guatemala border region, and it is the pillar for the eradication of this pest in collaboration with the US and Guatemala governments. A similar strategy is being implemented to fight huanglongbing (HLB), which poses the biggest

threat to citrus trees. For this reason, in 2008 Mexico initiated a series of actions to detect and fight it in agricultural and urban areas in the country.

## THE CHALLENGES FOR THE G20 AND THE MEXICAN PRESIDENCY

To develop the G20 work strategy, Mexico must establish inclusive consultation mechanisms with the participation of farmers' organizations, representatives of states, legislators, the academic sector, non-government organizations and civil society, to gather proposals to enrich this dialogue. At the end of the day, the challenge lies in increasing agricultural productivity with a focus on developing countries. And the only solution to achieve food security and mitigate food price volatility is an increase in the supply of agricultural products.

But this is not a new phenomenon; it must be addressed correctly and decisively. This should be Mexico's proposal.



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The G20 Booklets are an informative collection of articles of the Matías Romero Institute that features the G20's core issues. The objective of the collection is to bring experts and the public in general closer to the issues related to the G20's collective actions on the occasion of the Leaders Summit of this international informal negotiation forum to be held in Los Cabos, Baja California Sur, in the month of June 2012.

