CALL FOR PROPOSALS 2019

"Increase in Productivity in Family Agriculture with Sustainability, Inclusion and Profitability"

TERMS OF REFERENCE
TECHNICAL ADMINISTRATIVE SECRETARIAT (TAS)

Organized by FONTAGRO

With the support of BID Banco Interamericano de Desarrollo

IICA

CONTENTS

SSECTION I. BACKGROUNDS 3

SECTION II. ABOUT FONTAGRO 4

SECTION III. OBJECTIVE OF THE CALL 4

SECTION IV. FINANCING 5

SECTION V. ESTABLISHING A REGIONAL INNOVATION PLATFORM (RIP) 6

SECTION VI. SUBMISSION AND EVALUATION PROCESS OF PROFILES AND PROPOSALS 7

SECTION VII. TIMELINE 10

INFORMATION Y CONSULTANTS 10

GLOSSARY OF TERMS 11

REFERENCES 12

SECTION I. BACKGROUND

1.1 Global challenges of agricultural production and sustainable management of natural resources in the context of climate change to 2050. Looking ahead to the coming decades, one of the greatest challenges facing humanity is how to meet the growing needs of the population in terms of demand for food, while at the same time ensuring the sustainability of natural resources and resilience to climate change. It is estimated that, by 2050, the world population will exceed 9 billion people and the middle class will account for more than half of the population[1]. The increase in population will intensify competition for resources between agriculture and the level of urbanization. The FAO[2] estimates that climate change will be one of the permanent challenges for agricultural production which will require its transformation to new adapted and sustainable systems. Food production will need to increase by 70% to meet demand, and 80% of that increase will have to be generated through improvements in productivity and sustainable intensification of agricultural systems, while the rest will come from expansion of land use.

1.2 Importance of improving agricultural productivity in the world and in Latin America and the Caribbean (LAC). How to improve productivity has been a crucial issue in the history of world agriculture, especially given its connection with food security (meeting the growing demand for food), and with the strengthening of the agricultural sector and the economy of countries. **Productivity** is the relation between total production and inputs used (factors of production) or growth in product not explained by the growth in use of inputs. There are numerous studies on this subject; however, few of them relate to LAC, and especially to FONTAGRO member countries. In agriculture, the productivity of the factors has been estimated and monitored with differing frequencies and methodologies. Although LAC enjoys high growth in agricultural productivity compared to other regions, large differences persist between countries in the region. Some research finds that, in recent decades, the main source of growth of agricultural product moved from being based on use of factors (more use of land, labor, capital, and other inputs, etc.) to productivity gains provided by technological change, improvement of technical and economic efficiency (obtaining more product with equal or less use of factors), economies of scale, and/or a combination of all of them. This change was related to the availability of new technologies and innovations resulting from continuous investment in research, development and innovation (R&D+i), institutional changes, incentives for producers, education and rural extension, improvements in infrastructure, among others[3].

1.3 Agricultural productivity and the current debate. The current debate also indicates that global productivity could fall in the coming decades unless there is public and private investment in agriculture which promotes technological progress. It is estimated that to achieve production targets in developing countries, there is an investment gap in research and development of almost 83 billion dollars (FAO, 2009[4]). In this context, it is important to get to know the sources that lead to different performances of agricultural productivity between countries. For example, productivity improvement in Canada was linked to technical change, improvements in technical efficiency, economies of scale and specialization (Veeman and Gray, 2010[5]). In the case of the United States, improvement in productivity was due to large investments in R&D, changes in the type and quality of inputs (seeds, fertilizers, agrochemicals), higher level of education and experience of producers, greater investment in irrigation infrastructure, communications, electrification and logistics. In China, on the other hand, the political reforms implemented in the sector in the 1980s had a positive impact on productivity based on several pillars: continuous public investment in R&D and technical change, use of key inputs (fertilizers and seed genetics), improvements to extension systems and incentives for diversification (Jin, Huang and Rozelle, 2010[6]). In the case of India, the source of improvement in productivity was above all the technological change and innovations that facilitated adoption by family farms, public investment in R&D, in human capital, infrastructure (irrigation, electricity), extension, animal health and in the development of markets. The Indian igovernment strengthened the agricultural R&D system by implementing policies that promoted innovation through use of ICTs, facilitating technology transfer. India based its growth model on use of fertilizers and seeds, developed a system of subsidies and credits to producers which allowed them to invest in irrigation and agricultural machinery, increasing the intensity of cultivation and productivity of the land (Singh and Pal, 2010[7]). In Brazil, the source of growth of the agricultural sector was related to use of key inputs and strengthening of the agricultural research system, among others (Fuglie, 2010)[8]). In the case of Argentina, several studies analyze productivity in historical perspective, showing how modernization of technologies and technological change (new machinery, seeds, fertilizers, better quality of agrochemicals), human capital and new forms of organization of production facilitated

expansion of the farming frontier, more intense land use, labor productivity and total productivity.

1.4 Latin America and the Caribbean (LAC) and family farming. LAC has 38% of the land allocated to the agricultural sector and one of the most important reserves of biodiversity, soils, and freshwater resources. The large area dedicated to agriculture, combined with a great diversity of climates, makes this region a critical for strengthening regional and global food security. However, a large proportion of the land is under the control of medium- and small-scale agriculture, estimated at approximately 15 million productive units covering 400 million hectares[9]. It is in this sector of small and medium-sized farms where the differences in productivity are greater than those that could be achieved by adopting innovations.

1.5 FONTAGRO supports the strengthening of regional innovation platforms to increase agricultural productivity in LAC. FONTAGRO wishes to support the strengthening of regional innovation platforms that promote the improvement of agricultural productivity in LAC. To do this, FONTAGRO is launching this call aimed at identifying the best project proposals that demonstrate a work plan whose results provide evidence of "increases in productivity in family farming with sustainability, inclusion, and profitability." The proposed innovations must be in line with FONTAGRO's Medium Term Plan (MTP) 2015-2020 and the Sustainable Development Goals (SDG).

SECTION II. ABOUT FONTAGRO

2.1 FONTAGRO was created in 1998 with the aim of contributing to the sustainable management of natural resources, improvement of competitiveness and reduction of poverty through development of technologies and innovations relevant to society. It currently has 15 member countries, and two sponsors, the Inter-American Development Bank (IDB) and the Inter-American Institute for Cooperation on Agriculture (IICA), the former being its legal representative.

2.2 The MTP 2015-2020 is a renewal of FONTAGRO's vision and mission, defining it as a cooperation mechanism to strengthen agro-food innovation in the member countries and not as a traditional fund dedicated solely to financing projects. Consequently, FONTAGRO financing is mainly used to establish and/or support cooperation platforms, leveraging resources from other agencies and institutions participants in the platforms. This call follows the four strategic lines of MTP 2015-2020: (1) technological, organizational, and institutional innovation in member countries, (2) adaptation and mitigation to climate change, (3) Sustainable intensification of agriculture and management of natural resources, and (4) competitive value chains and territories in a framework of equity and sustainability.

2.3 To date, FONTAGRO has supported more than 135 projects and initiatives, representing a total investment of US$106 million, of which US$39 million (37%) was contributed by FONTAGRO and other strategic partners (IDB, CGIAR-World Bank, AECI, Governments of Korea, Japan and New Zealand, among others); and US$67 million (63%) as counterpart by the project executing institutions.

2.4 FONTAGRO co-finances initiatives that generate agricultural Regional Public Goods (RPG)[10] for LAC, where countries share challenges and opportunities for growth and development which can be more efficiently addressed when institutions work together in a collective, participatory and cooperative way. In this respect, the regional platforms promoted by FONTAGRO are, in themselves, an RPG, as are the knowledge and lessons learned that they generate.

SECTION III. OBJECTIVE OF THE CALL

3.1 Objective. The objective of the call is to identify the best project proposals that demonstrate a work plan whose results provide concrete evidence of "increases

in productivity in family farming with sustainability, inclusion, and profitability." The initiatives must be based on prior validated scientific knowledge, and must promote new innovations or validate existing, promising or successful ones which improve productivity in family farming in LAC. The innovations must be framed in the FONTAGRO MTP 2015-2020, and be in line with the Sustainable Development Goals (SDGs).

3.2 Based on the considerations of the previous paragraphs and the interest of member countries of FONTAGRO and LAC, some examples of initiatives consistent with this call are given below (although not the only ones):

i *Initiatives that demonstrate complementarity or combination of technological, organizational and/or institutional innovations*. For example, innovations that increase partial or total productivity on farms, contributing to closing the yield gap with sustainability, inclusion of crop actors and profitability; that strengthen development of new organizational forms of producers or are the basis for design of local or national policies. The following can be considered validated technologies or combinations thereof (improved crop varieties, animal genetics, efficient use of water and soil resources, plant and animal nutrition practices, agronomic management, among others) which achieve increases in the productivity of the land, work and capital (individually or in combination).

ii. *Climate change adaptation and mitigation initiatives*. For example, development of climate-smart agricultural initiatives based on use of crop and animal genetics (tolerance to abiotic factors such as thermal extremes, flooding, drought), agronomic practices and management strategies, capture of key data for crop management (optimization of sowing, management of nutrient and of pests and diseases) and animal husbandry (feeding, health, reproduction, handling), among others.

iii. *Initiatives of sustainable intensification of agriculture and natural resources management*. For example, integrated management of farms, strategic diversification of production, use of bio-inputs, management of use of water, soil and its fertility, of the ecosystem and biodiversity, among others.

iv. *Initiatives that combine the abovementioned along with development of value chains and competitive territories*, *which demonstrate productivity improvements, with sustainability, inclusion and profitability.*

SECTION IV. FINANCING

4.1 Amount of the Call. This call will be held with FONTAGRO's own resources. The total amount of the call is US$800,000. FONTAGRO will co-finance up to four proposals for a maximum US$200,000 each.

4.2 Counterpart. The institutions that participate in the platforms must, individually or in association, co-finance the proposal by providing counterpart funds in cash or kind, or a combination of both. The minimum counterpart amount of the proposal must be twice the amount requested from the financer.

4.3 Policies and conditions. This call will be subject to the provisions detailed in the Current FONTAGRO Operations Manual (MOP), IDB policies, and these Terms of Reference.

4.4 Additional sources of financing. This call may have additional funding sources if at the time of the final selection of proposals other agencies are interested in co-financing them, in accord with their priorities of regionality and/or other special conditions.

SECTION V. ESTABLISHMENT OF A REGIONAL INNOVATION PLATFORM (RIP)

5.1 Regional Innovation Platform (RIP). The call will support Regional Innovation Platforms (RIP), existing or new, constituted by public agents or public-private partnerships that share vision, mission and objectives. These RIPs must encourage practices and/or institutional arrangements that promote the public and/or public-private entrepreneur ecosystem and facilitate development of promising or successful innovations for family farming in LAC. The regional platforms will link the actors in science and academia with the entrepreneurial sector, producers and other strategic actors, creating public-public or public-private organizational models.

5.2 Participants in the PRI. The RIP must link the different actors with end users or beneficiaries (family producers or others). To do this, RIPs must be formed by: a) at least one public or private scientific research center, b) users or beneficiaries (family farmers or other agents receivers of the innovation) who must be included in the test or validation process, c) an entrepreneur or entrepreneurial team (optional), and/or d) other related institutions (optional).

5.3 Administrative role of participants during implementation of the RIP. From the point of view of the administrative implementation of the proposal, one of the institutions will act as executing body and will therefore be legally authorized to sign a contract with the IDB and manage funds in United States dollars on behalf of the rest of the participants in the platform, which will act as co-executing bodies (if they receive funds from FONTAGRO) and optionally as partner organizations (if they participate with their own funds).

5.4 Technical role of the participants during implementation of the RIP. RIP participants must be multi- and inter-disciplinary and demonstrate a multidimensional approach (productive-agronomic, social, economic, technological, environmental, value added, among others) consistent with the proposed innovation. From the point of view of technical complementarity of functions, participants can be public, private, national, regional and/or international.

5.5 General Aspects of Regionality. This call prioritizes the establishment of platforms integrated by partners from different regions with diverse complementary capacities and strengths in technical disciplines. The following regions are recognized: (1) Southern Cone, (2) Andean Region, (3) Central America, (4) Caribbean Region, and (5) extra-LAC region.

5.6 Aspects of FONTAGRO Regionality. FONTAGRO will co-finance proposals executed by the RIP constituted by public institutions or public-private partnerships of at least two FONTAGRO member countries . This means that the activities to be carried out in the proposal must be implemented in at least two FONTAGRO member countries. After this requirement has been met, other institutions from non-member countries of FONTAGRO, but always members of the IDB, and regional and international organizations, may participate as associated organizations with a facilitating or complementary role, with their own resources.

5.7 Aspects of Global Regionality. Institutions from non-IDB member countries may participate by contributing their own funds to the RIP, either by entering into an agreement with the IDB, legal representative of FONTAGRO, or directly with the institutions in the platform and in agreement with the IDB/FONTAGRO.

SECTION VI. PROCESS OF APPLICATION AND EVALUATION OF PROFILES AND PROPOSALS

The process of submission and evaluation of this call is organized into two phases: PHASE I (submission and profile evaluation) and PHASE II (submission and evaluation of final proposals).

PHASE I: SUBMISSION AND EVALUATION OF THE PROFILE

6.1 Opening of the call. The call will be open from **February 1 to April 22, 2019**. Section VII details the relevant dates.

6.2 Preparation of a profile. A profile is a brief presentation of the project proposal. The profile must be prepared with the participation of the members of the RIP, in Spanish following the Instructions of the Electronic Profiles Application Form, which can be accessed on the FONTAGRO website.

6.3 Submission of the profile on the electronic form on the FONTAGRO website. The profile application is made on an electronic form on the FONTAGRO website. The participant acting as executing body will register the profile, previously creating a username and password. Each profile will have a unique code assigned automatically. Profiles that reach FONTAGRO by other means or formats will not be accepted.

6.4 Deadline. The deadline for submitting the profile is **April 22, 2019 at 12 PM Eastern Time**. It is recommended to send the profiles a few days before the deadline to avoid congestion on the Internet site. Profiles that arrive at FONTAGRO after the established date and time will not be accepted.

6.5 External evaluation panel of profiles. FONTAGRO, with the support of its sponsors, will select a group of qualified experts to form an external evaluation panel of the profiles that apply to this call. The panel will make the evaluation (Phase I) and prepare a recommendation report on the profiles that can move onto PHASE II. Profile evaluation will take place from April 22 to May 20, 2019.

6.6 Profile evaluation criteria. The evaluation criteria for the profiles are detailed in the current FONTAGRO Operations Manual (MOP) and in these terms of reference. In this PHASE I, two evaluations will be made: **i) evaluation of compliance with the formal eligibility criteria, and ii) technical evaluation**.

I. Evaluation of formal eligibility criteria. The formal eligibility criteria are listed in the FONTAGRO MOP (in Table 2) and supplemented by those presented in this section (Box 1). Compliance with the formal eligibility criteria of legality, term, amount and counterpart will be examined. A profile that does not comply with at least one of these requirements will be disqualified. Profiles that meet the above requirements will then be evaluated on the basis of the remaining formal eligibility criteria of congruence, regionality, technical capacity and coordination of the RIP. Additionally, the profiles must meet the following supplementary requirements:

Box 1 FORMAL ELIGIBILITY CRITERIA FOR THIS CALL AND SUPPLEMENTARY TO THE OPERATIONS MANUAL (MOP)

1. Legality: The participating institutions of the RIP must provide evidence of legal status.

2. Maximum Term: The maximum execution period will be 36 months.

3. Maximum Amount: The maximum amount that may be requested is US$200,000 per profile.

4. Minimum Counterpart: The profiles must offer minimum counterpart contributions of at least twice the amount requested, indicating whether it is a counterpart in cash, in kind, or a combination of both.

5. Congruence: The profile must be original in its approach and include activities in accordance with the stipulations of the terms of reference of this call.

6. Regionality: The profile must clearly specify who constitutes the RIP and that the activities will be carried out according to the requirements mentioned in Section V of these Terms of Reference.

7. Technical Capacity of the RIP: The profile must detail who participates in the RIP, highlighting experience and technical capacity in the matter.

8. Coordination in the RIP: The profile must clearly detail how the institutions participating in the RIP complement each other in their roles and responsibilities in order to achieve the proposed innovation, and the time to be devoted to the initiative.

II. Evaluation of profiles based on technical criteria. Once the previous verification has been completed, the profile that complies with the formal eligibility criteria previously listed will be evaluated based on the formal technical criteria detailed in the MOP (Table 3) and the supplementary requirements presented in this section (Box 2). Once this evaluation is completed, the profiles that receive scores equal to and/or greater than 75 points (on a base of 100 points) will be invited to present complete project proposals.

Box 2. TECHNICAL CRITERIA OF EVALUATION OF PROFILES OF THIS CALL SUPPLEMENTARY TO THE OPERATIONS MANUAL (MOP)

1. Evidence of validated scientific basis: The profile must demonstrate that the objective of the project is based on previously validated scientific evidence, stating the bibliographical references.

2. Evidence of market potential: The profile must describe the market potential of the proposed innovation, describing, for example, the value for users (beneficiaries) with quantitative, technical and economic indicators.

3. Scaling-up strategy: The profile must describe a strategy for scaling up the innovation once the financing of the call has ended. For this, the profile must consider the factors that affect the upscaling process, such as the minimum scale that makes the innovation profitable, generation and access to data and information, connectivity infrastructure, national regulations, among other factors that are key to this process.

4. Transfer strategy and intellectual property: The profile must describe a strategy of transfer and intellectual property between RIP members and in the case of achieving commercial scaling up of innovation. For this, the legislation in each participating country and the type of technological product generated by the project must be taken into account.

6.7 Communication of preselected profiles. FONTAGRO will inform only the proposers of the pre-selected profiles of the invitation to submit complete project proposals. **These preselected profiles will be available on the FONTAGRO website starting May 22, 2019** with the idea that if other institutions are interested in participating or contributing to the preparation of the final proposal, they may contact the platform leader who, on behalf of the platform, may accept or reject the offer of participation by other interested parties.

PHASE II: SUBMISSION AND EVALUATION OF FINAL PROPOSALS

6.8 Preparation of the final proposal. The final proposal must be prepared with the participation of the members of the RIP, in Spanish and in accordance with the "FONTAGRO Project Proposal Submission Instructions" which is available on the website. The final proposal must be prepared in Word format and the tables prepared and submitted in Excel format.

6.9 Submission of the final proposal through the FONTAGRO website. The final proposal must be submitted through the same online system, in accordance with the Instructions. The final proposal will consist of two documents: a) the proposal form (Word document), and b) the form with additional information in Excel format. Final proposals received by FONTAGRO by other means or formats will not be accepted.

6.10 Deadline. Final proposals must be received not later than **August 9, 2019 at 12:00 PM, US Eastern Time**. Once received, the proposals cannot be changed. Proposals will not be received after the established closing date and time, or if sent by other means.

6.11 Evaluation of final proposals. The external panel will evaluate the final proposals according to the criteria mentioned in the MOP (Table 4) and others supplementary to this call (Box 3). The panel will recommend financing for proposals with scores of 75 points or more (based on 100 points). The final proposals will be evaluated from August 9 to September 13.

Box 3. TECHNICAL CRITERIA OF EVALUATION OF PROPOSALS OF THIS CALL AND SUPPLEMENTARY TO THE OPERATIONS MANUAL (MOP)

1. Evidence of validated scientific basis: The proposal must demonstrate that the proposed innovation is based on scientific evidence previously validated by the institutions that developed it.

2. Institutional capacity and proposal of coordination within the RIP: The proposal must describe the capacity of the participating institutions to develop the roles mentioned in section V and how they complement each other technically and economically for achieving the proposed objective.

3. Scaling-up strategy and business plan: The proposal must describe the business plan, market potential, and the strategy of scaling up the innovation after finalizing the financing of the call, considering the factors that could affect it (demand segmentation, regulations, intellectual property, among others).

6.12 Co-financing recommendation report. The panel will prepare a recommendation report for co-financing of proposals which will be sent to the FONTAGRO Board (CD) for consideration. The Board will approve allocation of co-financing and its decision is final and unappealable.

6.13 Interview with finalists. FONTAGRO may request a consultation on the final proposals in a virtual or face-to-face interview to consider the co-financing decision.

6.14 Communication of selected proposals The FONTAGRO Technical Administrative Secretariat (STA) will inform only the winners of the co-financing approval, by email and on the FONTAGRO website.

6.15 Authorization of co-financing. The final proposals that receive comments from the external panel must incorporate such recommendations and make the necessary adjustments to the proposals not more than 30 days after the official communication of FONTAGRO on their selection.

SECTION VII. TIMELINE

PHASE I	DATES
Announcement of Call	January
Opening of Call (11 weeks)	February 1 to April 22
Deadline for submission of profiles	April 22
Profile evaluation (4 weeks)	April 22 to May 20
Invitation to profiles to prepare final proposals	May 22nd
PHASE II	
Development of final proposals (11 weeks)	May 22 to August 9
Receiving of final proposals	August 9
Evaluation of final proposals (5 weeks)	August 9 to September 13
Approval by the Board of Directors and communication to the proposers	October

INFORMATION Y CONSULTANTS

FONTAGRO

Technical Administrative Secretariat (TAS)
fontagro@iadb.org | www.fontagro.org

GLOSARY OF TERMS

Family Agriculture: this term broadly encompasses all producers that use family labor to carry out agricultural activity in any of their roles (technical, economic, commercial, industrial, service, or others). According to Berdegué et al (2010), the sector totals 15 million family units covering approximately 400 million hectares in LAC.

Entrepreneur: an entrepreneur is an agent who identifies scientific knowledge with potential for transformation into an innovation which provides a solution to a user (beneficiary), which can potentially be scaled up with their own financing and supplementary services.

Multidimensional approach: refers to the analytical methodology based on different criteria for analyzing a particular topic. The criteria can be social, economic, technological, environmental, and/or others related to the subject under study.

Innovation: "Innovation is a participatory process by which individuals or organizations generate and/or use technological, organizational and institutional knowledge that results in new goods and services, and which, once appropriated by society, generate a social, economic, environmental and/or cultural benefit.".

Institutional innovation: changes in the rules of the game that govern the relationships and interactions of agents in the chain and other public actors. Example: new standards, regulations, policies, new public-private relationships that facilitate adoption of knowledge and technologies in a given context.

Organizational innovation: transformational changes in organizations that permit the use of knowledge and develop or improve jointly economic or social products or processes. Example: (1) inclusive, competitive and sustainable associative models, (2) organization of small producers for marketing purposes.

Technological innovation: changes in practices and processes required to increase the efficiency or quality of production and transformation processes in response to market demand. Example: new varieties or more productive breeds put on sale or processing, seed production techniques, machinery adapted to specific technical or practical conditions for management of water and soils introduced where others were not known.

Participatory research: research and/or extension method that begins with the joint definition of priorities with users, where they actively contribute during all the process, which results in their empowerment and increased use of the knowledge generated. Examples: field schools and local innovation committees, producer research groups.

REFERENCES

[1]Nikos Alexandratos y Jelle Bruinsma. 2012. World Agriculture Towards 2030-2050: The 2012 Revision. FAO. ESA working paper #12.

[2]FAO. El estado mundial de la agricultura y la alimentación. Cambio climático, agricultura y seguridad alimentaria. 2016. FAO, Roma.

[3]Fuglie, K.; Wang, S.L. (2012). New evidence points to robust but uneven productivity growth in global agriculture. USDA.

[4]FAO. 2009. How to feed the world 2050. Link a la publicación: http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf

[5]Veeman, T.; Gray, R. 2010. The shifting patterns of agricultural production and productivity in Canada. Chapter 6. En The shifting patterns of agricultural production and productivity worldwide. The Midwest Agribusiness Trade Research and Information Center. Iowa State University.

[6]Jin, S.; Huang, J.; Rozelle, S. 2010. Agricultural productivity in China. Chapter 9. The shifting patterns of agricultural production and productivity worldwide. Iowa State University.

[7]Singh, A.; Pal, S. 2010. Chapter 1. Introduction and Overview. The shifting patterns of agricultural production and productivity worldwide. The Midwest Agribusiness Trade Research and Information Center. Iowa State University.

[8]Fuglie, K. 2010 (a). Total factor productivity in the global agricultural economy: evidence from FAO data. Chapter 4. The shifting patterns of agricultural production and productivity worldwide. Iowa State University.

[9]Truitt Nakata, G. y Zeigler, M. (2014). The Next Global Breadbasket, How Latin America can feed the world. IDB.

[10]Definition based on the IDB RPG Regional Public Goods Program.

[11]To see which countries are FONTAGRO members, go to: https://www.fontagro.org/es/quienes-somos/organizacion/paises/