

**MEXICO**

**CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS FOR  
DIRECT SUPPORT TO RURAL AREAS  
(ME-X1009)  
AND  
FIRST INDIVIDUAL LOAN FOR THE FARMERS DIRECT SUPPORT  
PROGRAM  
(ME-L1041)**

**LOAN PROPOSAL**

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<b>Electronic Links</b>	
<b>Mandatory</b>	
Complete procurement plan <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2019200">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2019200</a>	
Environmental and Social Management Report (ESMR) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2025060">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2025060</a>	
<b>Optional</b>	
Statistics Annex <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2020681">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2020681</a>	
<b>Studies</b>	
<ul style="list-style-type: none"> <li>(a) The Rural Sector in Mexico: Challenges and Opportunities, Policy Note, Inter-American Development Bank Ardila, Sergio (2006): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559782">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559782</a></li> <li>(b) Economic Integration and the Mexican Agricultural Sector: Evaluation and Policy Options, Study, Inter-American Development Bank, Yúnez Naude, Antonio and George Dyer Leal (2006): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559792">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559792</a></li> <li>(c) Designing a new PROCAMPO program: Lessons from OPORTUNIDADES, Report presented to the Inter-American Development Bank for the project MEXICO: POLICY STUDIES AND FEDERAL PUBLIC SPENDING FOR THE RURAL SECTOR, Winters, Paul and Benjamin Davis (2007): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559791">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559791</a></li> <li>(d) The Microeconomics of Poverty Traps in Mexico, DEGIT, Dynamics, Economic Growth, and International Trade, Conference paper, Chavas, Jean-Paul and Hector J. Villarreal (2005): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559786">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559786</a></li> <li>(e) More calories or more diversity? An econometric evaluation of the impact of the PROGRESA and PROCAMPO transfer programs on food security in rural Mexico, Mimeo. Ruiz-Arranz, Marta, Benjamin Davis, Marco Stampini, Paul Winters and Sudhanshu Handa (2002): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559789">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559789</a></li> <li>(f) Quantitative Analysis of the Effect of Transfers to the Rural Sector: Ingreso Objetivo, PROCAMPO and Oportunidades, Inter-American Development Bank. Dyer, George A. (2007): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559787">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559787</a></li> <li>(g) PROCAMPO Impact Evaluation and proposed reforms for the agricultural support system, ADESCO (2007), Inter-American Development Bank <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2044032">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2044032</a></li> <li>(h) Study of the performance of the Farmers Direct Support Program, farming year 2006, Final Report. Associated Economists Group (GEA, by its Spanish acronym) (2006): <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559788">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559788</a></li> </ul>	

- (i) Diagnostic Assessment and Reform Proposal for PROCAMPO: Support Policy for Growth with Equity in the Mexican Countryside, CIDE, 4 March 2008, Inter-American Development Bank, John Scott.
- (j) Proposed changes to PROCAMPO, Juan Manuel Torres Rojo, 2008, Inter-American Development Bank <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1469986>
- (k) Analysis of Reform Alternatives for PROCAMPO in Mexico, Humberto J. Jiménez Ojendiz, March 2008, Inter-American Development Bank  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1469987>
- (l) Diagnostic Assessment and Proposed Reforms for the Farmers Direct Support Program (PROCAMPO), Inter-American Development Bank  
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- (m) Executing agency's institutional capacity evaluation report: ASERCA, 2008,  
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- (o) Operating Regulations PROCAMPO 2009  
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<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2026191>

**APPENDICES**

Proposed resolution

## ABBREVIATIONS

ASERCA	Apoyos y Servicios a la Comercialización Agropecuaria [Agricultural Marketing Support and Services]
CCLIP	Conditional credit line for investment projects
INEGI	Instituto Nacional de Estadística y Geografía [National Statistics and Geography Institute]
MXN	Mexican peso
NAFIN	Nacional Financiera S.N.C. [National Finance Corp.]
NAFTA	North American Free Trade Agreement
OECD	Organization for Economic Co-operation and Development
PCR	Project completion report
PROCAMPO	Programa de Apoyos Directos al Campo [Farmers Direct Support Program, or the Program]
PSE	Producer support estimates
SAGARPA	Ministry of Agriculture, Livestock, Rural Development, Fishery and Food
SEMARNAT	Ministry for the Environment and Natural Resources

## PROJECT SUMMARY

### MEXICO

### CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS FOR DIRECT SUPPORT TO RURAL AREAS (ME-X1009)

#### AND

### FIRST INDIVIDUAL LOAN FOR THE FARMERS DIRECT SUPPORT PROGRAM (ME-L1041)

Financial Terms and Conditions				
<b>Borrower:</b> United Mexican States <b>Executing agency:</b> Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food			Amortization period:	25 years
			Grace period:	5 years
			Disbursement period:	3 years
Source	Amount (US\$ million)		Interest rate:	LIBOR-based Single Currency Facility
	CCLIP	First Loan	Inspection and supervision fee:	*
IDB (Ordinary Capital)	2,500	750	Credit fee:	*
Local	0	0	Currency: U.S. dollars from the Bank’s Ordinary Capital Single Currency Facility	
Total	2,500	750		
Project at a glance				
<b>Project objective and description:</b> The objective of program ME-L1041 is to improve beneficiary producer income by raising income levels and reducing fluctuations due to price variations and other types of contingencies. To achieve this objective, the program seeks to improve the net income of beneficiary producer units by increasing agricultural and nonagricultural productivity and competitiveness. The program comprises the following components: (i) Operational improvement of the Farmers Direct Support Program (PROCAMPO); (ii) Direct transfers to producers; and (iii) Monitoring and evaluation system.				
<b>Special contractual conditions:</b> (a) Conditions precedent to the first disbursement: signature and entry into effect of the Program Mandate and Execution Agreement (paragraph 4.1); and (b) During project execution: (i) retroactive financing of eligible expenses charged to the loan (paragraph 4.9), and project evaluation (Annex IV).				
<b>Exceptions to Bank policies:</b> As described in paragraph 4.10, a waiver is requested in respect of the Bank’s exchange rate policy (document GN-2415), such that for conversion to U.S. dollars the applicable exchange rate will be the rate in effect on the last day of the month preceding the month in which the expenses are incurred.				
<b>Project consistent with country strategy:</b> Yes [ X ]      No [   ]				
<b>Project qualifies as:</b> SEQ [ X ]      PTI [   ]      Sector [   ]      Geographic [   ]      Headcount [   ]				
<b>Procurement:</b> The procurement of goods and services for the program will be carried out in accordance with the Bank’s procurement policies for Bank-financed procurement (documents GN-2349-7 and GN-2350-7).				

\* The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provisions of the Bank's policy on lending rate methodology for Ordinary Capital loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

## **I. FRAME OF REFERENCE**

### **A. Introduction**

- 1.1 The proposed Conditional Credit Line for Investment Projects (CCLIP) (ME-X1009) will support the Mexican government's Farmers Direct Support Program (PROCAMPO). The CCLIP has been structured with a first individual loan operation to finance: (i) cash transfers to producers with up to 10 hectares of land; (ii) improvements in critical program operations to enhance transparency, reduce the administrative costs of Agricultural Marketing Support and Services (ASERCA), and make procedures easier for users through increased utilization of bank services; and (iii) an impact evaluation to provide detailed information on impacts and their heterogeneity, and the specific mechanisms through which they are created. The objective of subsequent operations will be to finance direct transfers in future years and make further adjustments to PROCAMPO based on an evaluation of the first CCLIP operation, as well as others that improve operations. The proposed CCLIP for US\$2.5 billion will be of six years' duration, and is expected to consist of two other individual loan operations.

### **B. The rural sector, its structure, and the reforms of the 1990s**

- 1.2 The Mexican agricultural sector is highly heterogeneous. In the south, agricultural activity is predominantly dryland subsistence farming on holdings of less than five hectares. The land is arid, access to markets is difficult, and extreme poverty is high. In the north, agricultural activity tends to be carried out on irrigated farmland, with reasonably good road infrastructure and storage facilities. Production is large scale and able to produce high yields thanks to advanced technology, and operations enjoy privileged access to the North American market. In southern Mexico, the rural food poverty rate is nearly 50%, whereas in the north it is closer to 10%, comparable to the rate prevailing in urban areas.
- 1.3 Mexico recognizes two types of non-public land ownership: social ownership, accounting for some 103 million hectares of cooperative farms (*ejidos*) and agrarian communities, of which some 34 million hectares are individual holdings and 69 million are community lands; and private property covering 92 million hectares. One quarter of all community land is covered by forest, and the rest is essentially open land with or without vegetation. The sector is scattered widely, with 31,500 communities and some 3 million communal farmers or *ejidatarios*. Approximately 30 million hectares are dedicated to agricultural activity (crops), while only 19 to 22 million hectares are planted every year, of which 25% are irrigated. Although irrigated farmland is a small fraction of the total agricultural area cultivated, it generates 57% of production and 70% of agricultural exports. The largest proportion of this surface, nearly 9 million hectares, is used to grow cereals, with corn accounting for more than 90%.
- 1.4 As part of its macroeconomic stability programs and the process of trade liberalization and structural adjustment, Mexico enacted major reforms of the agrifood sector starting in the mid-1980s. These reforms radically altered sector

incentives, the structure of the state apparatus, and the system of resource ownership. In the following decade, trade liberalization and the 1994 North American Free Trade Agreement (NAFTA), together with the elimination of guaranteed prices, subsidies on key products such as the corn tortilla, and state interventions in the product and input markets brought about a substantial reduction in agricultural supports to producers, especially those supports causing the greatest distortions through prices and trade barriers. According to Organization for Economic Co-operation and Development calculations, Producer Support Estimates (PSE) dropped from approximately 30% of agricultural revenue in the early 1990s to 14% in 2007, and the component provided through price support dropped from 81% in 1993 to 67.3% in 1999 at the conclusion of the sector reform process, and to 27.3% in 2007.<sup>1</sup>

- 1.5 The Bank supported the agrifood sector reform process through technical dialogue and financial support. In 1996, the Bank approved a US\$400 million sector loan for a Food and Agriculture Sector Restructuring Program (906/OC-ME), whose objectives were: (i) to improve sector efficiency and competitiveness; (ii) to support the restructuring of production; and (iii) to facilitate the adjustment for low-income producers and consumers. The project completion report found that the Ministry of Livestock, Agriculture, Rural Development, Fisheries, and Food (SAGARPA), the sector's policy-setting body, had performed very well during project execution.
- 1.6 The results of these reforms have so far been mixed. On the one hand, in terms of international trade, agricultural trade with the United States was up on the strength of a sustained increase in fruit and vegetable exports while imports of basic grains and oil seeds (corn, sorghum, soya, wheat) remained stable. Fruits and vegetables grew from 33.9% of gross production in 1993 to 37% in 2007. Investments in farming technology, especially irrigation in northern Mexico, resulted in higher average annual yields of the principal crops from 1990 to 2007: 2.8% for corn; 1.1% for wheat; less than 1% for beans. On the other hand, the agricultural sector expanded on average by 2.1% a year from 1993 to 2007, less than the 3% annual growth posted for the rest of the economy during the same period. Rural poverty levels remained constant from 1994 to 2006, and the north-south regional divide in rural development did not change substantially.
- 1.7 One important aspect worth underscoring is that after trade liberalization and the elimination of guaranteed prices and subsidies, the Mexican government began to implement public support programs with direct transfers to producers to offset the negative impact of sector reforms, and to provide incentives with different objectives (see Box 1). The Farmers Direct Support Program (PROCAMPO), described in the box below, is one of the most important of such programs.

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<sup>1</sup> The drop in price support with respect to the total PSE for the most recent period (2007) is due in part to the difficulty in operating price support programs as a result of the spike in world food prices.



**Box 1 Principal agricultural programs created during the 1990s reforms**

In addition to PROCAMPO, the government created two public programs as part of the sector reforms of the past decade, which together have accounted for 50% to 67% of SAGARPA's budget since its inception:

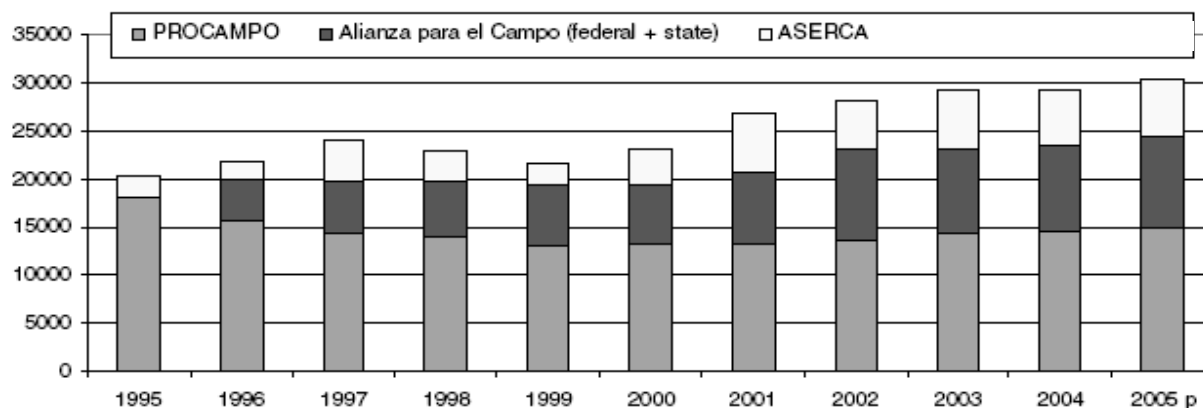
- a Agricultural Marketing Support and Services (ASERCA). Launched in 1992, ASERCA was initially intended to reduce the impact of eliminating price guarantees for soya, sorghum, and wheat. Subsequently, its coverage was broadened to offset the impact of eliminating the National People's Subsistence Company (CONASUPO) and other public agencies. The operating structure was modified a number of times during the 1990s, and was replaced in 2002 by the *Ingreso Objetivo* program and plans to support the purchase of price insurance through options. *Ingreso Objetivo* is quite similar to the United States deficiency payments programs, eliminated by the 1996 agricultural act and reinstituted by the 2002 act.
- b *Alianza Contigo*. Created in 1995 and later renamed *Alianza para el Campo*, it was conceived as an instrument to foster capitalization and technological change among producers. The program operates through the states, co-financing a portion of producer investment project costs, selected from a menu of options to increase production, achieve self-sufficiency in staples, and foster exports.

The number of public programs targeting farmers was later expanded. In 2008, the government restructured SAGARPA's budget into eight large groups: (i) *Support for structural programs*, including *Ingreso Objetivo*, supports for the purchase of price insurance, subsidies for agricultural and marine diesel, and other marketing supports; (ii) *Support Program*, providing for technological research/transfer, sanitation, trade promotion, etc.; (iii) PROCAMPO; (iv) *Purchase of productive assets*, comprising several ALIANZA programs; (v) *Inducement to Financing*, providing support to financial intermediaries to reduce their costs, and contributions for the creation of guarantee funds to support certain types of operation; (vi) *Sustainable use of natural resources*; (vii) *Climate emergency response*; and (viii) *Promotion of stakeholder participation in rural development*, including supports for production systems and social and community organizations.

**C. The Farmers Direct Support Program - PROCAMPO**

- 1.8 PROCAMPO was set up in 1994 essentially for the purpose of compensating producers of basic crops (corn, barley, beans, cotton, rice, sorghum, soya, safflower, and wheat) for the effects of eliminating price subsidies due to trade liberalization. The two central features of the program are: (i) freedom for producers to pursue the farming or conservation activity of their choice, thereby earning the World Trade Organization classification as a decoupled non trade-distorting payment; and (ii) uniform payments per hectare per production cycle, so as to reach beneficiaries regardless of the holding size, making it the SAGARPA program with the most successful distributive capacity. In 2009, more than one half (55%) of PROCAMPO's resources will be distributed among farmers with holdings of up to five hectares. When the program was created, the list of eligible holdings was limited to those sown with a product selected in one of the three previous agricultural cycles. Using this definition, the area selected covered 13.5 million hectares farmed by approximately 3.3 million beneficiaries. Presently, with 2.7 million farmers, PROCAMPO remains the most important public program in the SAGARPA budget. The chart below shows the budget evolution in millions of pesos for the three key programs in the period 1995-2005. PROCAMPO's participation has clearly decreased, whereas the Agricultural Marketing Support

and Services (ASERCA, Box 1) has gained in importance, an indication of the changing composition of support.



Source: OECD, 2006

- 1.9 In 2001, the Bank provided support for PROCAMPO under a US\$500 million investment loan for a program in support of small farmers through PROCAMPO (1334/OC-ME). The objective of this program, executed by SAGARPA through ASERCA,<sup>2</sup> was to help small farmers use their resources more efficiently during the spring-summer season as a means of boosting their capacity. The operation improved the timeliness, availability for production, and certainty in delivery of PROCAMPO support to beneficiaries (producers with up to five hectares) since payments were disbursed in advance before planting, and not afterwards as had been the case in the past. The operation terminated in 2005. The PCR classified the operation as very effective in achieving its development objective.
- 1.10 Independent evaluations of PROCAMPO<sup>3</sup> found that: (i) from 1994 to 1997 producer income soared 18%; (ii) every peso provided by PROCAMPO leveraged from 1.5 to 2.6 additional pesos for investment in agriculture by removing liquidity constraints for beneficiaries; and (iii) the fiscal cost was less than previous requirements under the price subsidy scheme. Significant benefits were noted as such support increased the use of production inputs and investment in both agricultural and nonagricultural activities. In terms of distribution, the OECD

<sup>2</sup> ASERCA is a decentralized administrative body of SAGARPA created by Presidential Decree on 16 April 1991, as an instrument to spur agricultural production marketing efforts for the benefit of producers. Its basic functions include operating and administering PROCAMPO.

<sup>3</sup> Sadoulet, E., A. de Janvry and B. Davis, *Cash Transfer Programs with Income Multipliers: PROCAMPO in Mexico*, World Development Vol. 29, Issue 6, June 2001, pp. 1043-1056.

ASERCA annual evaluations for 2004 to 2007 are available at: [http://www.e-mexico.gob.mx/wb2/eMex/eMex\\_Programa\\_de\\_Apoyos\\_Directos\\_al\\_Campo\\_PROCAMPO](http://www.e-mexico.gob.mx/wb2/eMex/eMex_Programa_de_Apoyos_Directos_al_Campo_PROCAMPO). These evaluations contain methodological limitations owing to the small size of the non-beneficiary sample considered in the survey, and the failure to use specific methodologies to identify comparable control groups as close as possible to program beneficiaries.

Mexico Agriculture Policy Review<sup>4</sup> concluded that the combination of limited market intervention with the introduction of direct supports generated clear revenue gains for the poorest beneficiaries when compared to the agricultural policies in place before PROCAMPO. In the same vein, a study by Chavas and Villareal<sup>5</sup> shows a positive correlation between assistance and physical capital formation. As program participants must be land owners, the very poor are not included.

- 1.11 PROCAMPO was created for an initial period of 15 years. However, in 2009 the government extended the duration of the program owing to its coverage, effectiveness, equity, and capacity to transfer income with few distortions. In discussions with the Bank, it was decided that the extension should be accompanied by three major adjustments to improve the program. First, payments were made more progressive. Payments for holdings of up to five hectares were increased to MXN\$1,300/hectare (a 12% increase), with the payment of MXN\$963/hectare for larger holdings remaining unchanged. Also, payments were capped at MXN\$100,000 per beneficiary. PROCAMPO has a budget of MXN\$16.678 billion for 2009. Second, to improve operating efficiency, the government updated and georeferenced the list of beneficiaries. Third, the payment bankarization process would be accelerated, thereby lowering administrative costs, enhancing process transparency, and encouraging more beneficiaries to use financial services.

**D. Rationale for the ME-X1009 CCLIP and the first individual loan ME-L1041**

- 1.12 Sector policy reforms adopted in Mexico ensure that market signals are clearer and that private resources are used and allocated more effectively in productive rural activities. More importantly, the change from price sustaining instruments and trade policy to direct transfers as a producer support mechanism reduces distortions and ensures more equitable and effective use of public agrifood spending. In this context, the extension of the PROCAMPO program not only provides continuity to the sector support policy and contributes to its effectiveness, but also increases and gives more stability to the family income of low and middle income producers. Bank-supported adjustments for the extension of this public program, and linkages with future improvements based on technical evaluations of preceding phases are indicative of the government's commitment to ameliorating the program in the long term. Accordingly, a CCLIP is the ideal financial instrument for the IDB to closely support any actions the government may take under this commitment.
- 1.13 The objective of CCLIP ME-X1009 is to support the PROCAMPO reform process, financing operational improvements and subsequent refinements to the instrument and its operating regulations based on the project-financed impact evaluation. Each individual loan operation under this line, including the first one, will have an impact evaluation to determine more fully how the payments affect the economic situation

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<sup>4</sup> OECD (2006), *Agricultural and Fisheries Policies in Mexico: Recent Achievements, Continuing the Reform Agenda*.

<sup>5</sup> Chavas, Jean-Paul and Hector J. Villareal (2005): "The Microeconomics of Poverty Traps in Mexico", *Dynamic, Economic Growth and International Trade (DEGIT) Conference Paper*, Mexico.

of the different types of producers in the different regions where PROCAMPO operates. The field data gathered as part of the process of monitoring each individual loan operation will facilitate a technical analysis of the effectiveness of transfers.

- 1.14 The borrower satisfies the following criteria for access to the CCLIP (document GN-2246-4): (i) SAGARPA has been executing PROCAMPO since 1994 through ASERCA (with Bank support from 2001 to 2005), with sound institutional and fiduciary management; (ii) execution of PROCAMPO has been satisfactory, with audited financial statements presented as and when agreed, demonstrating that its financial and operational administration meets accepted quality standards; and (iii) the CCLIP intervention area has been prioritized under the program agreed with the national authorities in an effort to increase agricultural and nonagricultural productivity and competitiveness for the beneficiary sectors; this strengthens the system of direct transfers linked to low-income groups and reinforces the institutional capacity of the agencies concerned.

## II. PROGRAM

### A. Objective and components

- 2.1 The objective of program ME-L1041 is to improve beneficiary producer income by increasing earning levels and reducing fluctuations due to price variations and other types of contingencies. To achieve this objective, the program seeks to improve the net income of beneficiary producer units by raising agricultural and nonagricultural productivity and competitiveness. The program comprises the following components: (i) Operational improvement of PROCAMPO; (ii) Direct transfers to producers; and (iii) Monitoring and evaluation system.
- 2.2 **Component I. (i) Operational improvement of PROCAMPO (US\$36.5 million).** The program design would improve targeting effectiveness by verifying beneficiary eligibility criteria, and increasing the transparency of beneficiary data. Specifically, resources will be used in the following two areas:
- 2.3 Subcomponent 1.1: Georeferencing and updating the list of beneficiaries/ holdings. This subcomponent includes a process to verify holdings eligible for PROCAMPO transfers, so as to update the existing list established in 1993. This process will verify that holdings meet all program eligibility criteria, ensuring, in particular, that the land has not been used for purposes other than those legally permitted in the past three production cycles. At the same time, a georeferenced database will be generated to facilitate the program's administrative processes.
- 2.4 Subcomponent 1.2: Bankarization and the ASERCA integrated payment system. This subcomponent includes activities to improve the transparency, effectiveness, and reliability of PROCAMPO's payments system, and to expand the use of the financial system for the transfer of funds to beneficiaries through direct deposits or debit cards.

- 2.5 **Component II. Direct transfers to producers (US\$709 million).** This component will finance transfers to eligible producers with holdings of up to 10 hectares who meet the requirements in the PROCAMPO Operating Regulations approved for 2009,<sup>6</sup> recognizing that the program is intended to improve the conditions of low income producers. In accordance with the Operating Regulations, program beneficiaries must be individuals or businesses that own, hold title to, or possess a holding and are legally exploiting eligible surfaces registered on the PROCAMPO list. Pursuant to the Operating Regulations, beneficiaries may receive up to MXN\$100,000 (equivalent to US\$7,560 at the current exchange rate) per farming cycle. The per-holding quota for the Spring-Summer cycle will be: (i) unit quota of MXN\$1,300 (US\$100) for eligible areas of up to five hectares; (ii) unit quota of MXN\$1,160 (US\$90) for eligible areas of more than five hectares, to a ceiling of between six and 18 hectares as specified in the Operating Regulations for communal entities; and (iii) unit quota of MXN\$963 (US\$73) for all other holdings in the Spring-Summer growing cycle. The Fall-Winter growing cycle will receive a MXN\$963 quota. Farmers in categories (i) and (ii) will be entitled to support in advance of planting, whereas advance payments for category (iii) producers will be contingent upon the availability of budgetary resources.<sup>7</sup>
- 2.6 **Component III. Monitoring and evaluation system (US\$4.5 million).** This component covers data collection, processing, and analysis to generate a detailed impact evaluation of PROCAMPO. Data collection will involve surveys: (i) to draw up the 2009 baseline with a representative group of beneficiaries and a control group; and (ii) to create a data panel by means of a follow-up survey two years later. A detailed design is available in Annex IV.
- B. Cost and disbursement schedule**
- 2.7 Program ME-L1041 is designed as a specific investment loan. The total cost of the program is US\$500 million, which will be financed in its entirety with resources from the Bank's Ordinary Capital. The cost of the program by component and activity is itemized in Table II-1.

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<sup>6</sup> The regulations were published in the Official Gazette of the Federation (*Diario Oficial de la Federación - DOF*), on Wednesday, 8 April 2009. See electronic link.

<sup>7</sup> These amounts approved in the 2009 Operating Regulations are subject to change in future years in accordance with new Regulations and Congressional approval of budgets.

**Table II-1: Amount by component and type of expenditure\* (US\$ millions)**

	<b>Bank</b>	<b>%</b>
<b>Component I: Operational improvement</b>	<b>36.5</b>	<b>4.9</b>
I a. Georeferencing and updating the list	35	4.7
I. b. Bankarization and ASERCA integrated payment system	1.5	0.2
<b>Component II: Transfers to producers</b>	<b>709</b>	<b>94.5</b>
<b>Component III: Monitoring and evaluation system</b>	<b>4.5</b>	<b>0.6</b>
<b>TOTAL</b>	<b>750</b>	<b>100</b>

\* The cost of the audit and the financial expenses (interest and credit fee) will be borne by the borrower with nonprogram resources.

- 2.8 The execution period will be three years. The financing is expected to be disbursed according to the following time-line:

**Table II-2: Disbursement timeline (US\$ million)**

<b>Source</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
IDB	557.2	180.7	12.1	750
%	74.3	24.1	1.6	100

### **C. Results matrix key indicators**

- 2.9 The Results Matrix key indicators are specified in Annex II. The impact of the program will be determined by the multiplier effect of the transfers of income. These impacts will be generated by: (i) improvements to productive investment, inside and outside the farming production units; (ii) increases in the use of productive agricultural inputs and the way they are employed; (iii) higher consumption; and (iv) elimination of constraints to financial market access.

## **III. VIABILITY AND RISKS**

### **A. Economic viability**

- 3.1 There have been several economic evaluations of PROCAMPO, using three different methodologies: (i) econometric procedures to estimate its impact on beneficiary income (paragraph 1.10); (ii) estimates based mainly on beneficiary surveys of impact on use of inputs, investment, and family income (see link to 2006 GEA evaluation); and (iii) estimated impact on family income and the functioning of rural markets using simulation models calibrated for five rural regions in Mexico, in Bank-financed projects. All the studies show that PROCAMPO has had a multiplier effect on income of more than 1 and even close to 2 for some beneficiary groups. The evaluation financed by the Bank in 2007 before the increase in cereal prices, estimated that eliminating PROCAMPO would reduce income by 2.7% for producers in communities with under 2,500 inhabitants, affecting in particular producers with more than five hectares. This study estimated

that income transfers to these groups accounted on average for 2.3% of producer income nationwide, equal to an aggregate multiplier effect of 1.17. It should be noted that PROCAMPO's administrative cost is less than 1.8%.

**B. Risk of socioenvironmental safeguards**

- 3.2 PROCAMPO was conceived as a neutral instrument that should not have any negative social or environmental impacts. Yet several environmental analyses in Mexico identified adverse environmental impacts from agriculture that could be associated with PROCAMPO.<sup>8</sup> It should be added, however, that there are many different programs offering specific incentives for agricultural activity (to promote corn and other crops, the use of agrochemicals and other inputs, investments in machinery, adaptation for irrigation, etc.) that make it difficult to assess PROCAMPO's impact without detailed studies.
- 3.3 Several studies attribute to PROCAMPO such positive impacts as: (i) better financial security for producers; (ii) greater agricultural and nonagricultural productivity and competitiveness; (iii) increased purchasing power for smaller producers; and (iv) revitalized local economies. In addition, PROCAMPO has been able to show greater flexibility since 1995 when ecological projects were added as permitted land uses guaranteeing program eligibility. This facility, which is seldom used, (less than 30,000 ha) produced the following benefits: (i) soil conservation; (ii) reforestation or revegetation; (iii) erosion control; (iv) creation of new habitats; and (v) environmental recovery of degraded areas, to mention just some of the most important positive impacts. The facility has not been used more extensively because there is insufficient information about it and it requires the approval of Ministry for the Environment and Natural Resources (SEMARNAT).
- 3.4 This operation provides for a program impact evaluation component to reliably identify the impact of PROCAMPO's support on investment, use of production inputs, land use, access to financing, and consumption. This work will make it possible to evaluate some of the factors with an environmental impact associated with the program, and develop any needed adjustments for future years. In addition, under the PROCAMPO operational improvement component, the georeferencing and updating of the list of beneficiaries/holdings will make it possible to remove land put to improper uses: encroachment of the urban footprint or land incompatible with the proposed agricultural or forestry practices. Lastly, a preapproval mechanism for environmental programs agreed by consensus between SAGARPA and SEMARNAT will be included, thereby increasing the number of hectares that will benefit from the PROCAMPO Ecológico component.

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<sup>8</sup> These include: (i) greater pressure on natural resources; (ii) greater use of soil and water contaminating chemicals (mainly pesticides and agrochemicals); (iii) increased use of water for irrigation; (iv) early signs of soil salinization; (v) the transformation of some areas unsuitable for agriculture into cultivated areas; (vi) increased deforestation; (vii) slash and burn; (viii) habitat and ecosystem destruction as forests are converted to agricultural areas, and the resulting biodiversity loss; (ix) social conflicts arising from modifications/adjustments to the list of beneficiaries; and (x) fragmentation of land in an attempt to make it "eligible" for the program and receive the subsidy.

- 3.5 With these new elements and the existing general guidelines for the operation financed by the Bank in 2001, it is anticipated that this new operation will generate more favorable impacts and fewer incremental negative ones. Accordingly, in accordance with the Bank's Environment and Safeguards Compliance Policy (OP-703), the project team has classified this operation as Category "B."

**C. Fiduciary risk**

- 3.6 To determine fiduciary risk, ASERCA's institutional capacity was measured during project preparation using the SECI methodology. This methodology was used to assess programming and organization, execution (staff administration, goods and services, finance), and internal and external controls. The results demonstrated that the three systems are well developed, with an average rating of 94.7% and a low risk level. Based on this evaluation, it is recommended that disbursements be reviewed ex post.

**IV. IMPLEMENTATION AND ADMINISTRATION PLAN**

**A. Execution plan**

- 4.1 **Borrower and executing agency.** The borrower will be the United Mexican States, acting through the Ministry of Finance, which will use Nacional Financiera, S.N.C. [National Finance Corp.] (NAFIN) as its financial agent to administer the loan resources. SAGARPA, through ASERCA, will be the project executing agency. SAGARPA is a unit within the Executive Branch of the Mexican federal government. **As a special condition precedent to the first disbursement, the Program Mandate and Execution Agreement must have been signed by the borrower, SAGARPA, and NAFIN, and be in effect.**
- 4.2 **Program execution and administration.** ASERCA is the entity responsible for providing supports for marketing and direct supports, including PROCAMPO (see Box 1). Among its responsibilities under this program are: (i) procurement of goods and services for program execution; (ii) all payments for program-related consulting services and/or goods; (iii) maintaining of records of all program consultants and associated financial supporting documentation for subsequent entry in the books and for audits; and (iv) program monitoring and evaluation. These responsibilities will be discharged by the Support Coordination Office (CGA). Since PROCAMPO's inception 15 years ago, the CGA has developed the operating capacity to administer the program efficiently, and now has the human and physical resources to coordinate and monitor PROCAMPO's budget and financial programming.
- 4.3 Program administration will be governed by the PROCAMPO Operating Regulations, which set out the administrative, financial, and accounting procedures for operating the support system. These standards are reviewed and updated annually, and then formally approved by the Secretary of SAGARPA.



- 4.4 ASERCA, through its regional offices, executes a comprehensive process for each crop cycle that involves planning, recording, processing, verifying, paying, and auditing nearly three million PROCAMPO support transactions. Funds are disbursed by bank transfer (32%) or check (68%), through the support infrastructure of SAGARPA's 712 Rural Development Support Centers. This process is carried out through the SAGARPA and ASERCA regional offices, with occasional support from ASERCA's head office, using a financial accounting system interconnecting these offices. Under this system, supporting documentation required by the Bank will be submitted in a timely manner to process loan disbursements. ASERCA, through NAFIN, will present to the Bank the procedures for no objection and the consolidated disbursement requests for eligible expenditures. Based on this information, ASERCA will keep accounting records of program operations. These records, together with the supporting documentation submitted by the executing agency to identify beneficiaries, will serve as basis for the audits.
- 4.5 **Procurement.** The procurement of goods, works, services, and consulting services will be carried out in accordance with the Bank's procurement policies as updated (documents GN-2349-7 and GN-2350-7). International competitive bidding (ICB) will be used for procurement of goods and services in an estimated amount of US\$3 million or more. National competitive bidding (NCB) will be used for procurement of goods and nonconsulting services in an estimated amount of US\$100,000 or more but less than US\$3 million, and shopping will be used for procurement in amounts of less than US\$100,000. International advertising will be required for the selection of consulting services in an estimated amount of US\$200,000 or more. The short list of consulting firms for work estimated at less than US\$500,000 may consist entirely of national consultants.
- 4.6 Direct contracting may be used to hire various institutions. The National Statistics and Geography Institute (INEGI), which has proven expertise in collecting, processing, and disseminating statistical and geographic data, may be contracted directly to update and georeference PROCAMPO's list of beneficiaries. The maximum amount used for this purpose may not exceed US\$35 million. See the procurement plan for further details. The National Public Administration Institute (INAP), an entity specializing in developing competency standards, may be contracted directly for specialized tasks related to the bankarization and integrated payment system component, given its expertise and experience with process reengineering projects.
- 4.7 During program preparation, the executing agency's capacity to administer procurement was analyzed, and was found to be low risk (paragraph 3.6). Based on this analysis and the Country Procurement Assessment Report (CPAR), the Bank will review procurement of goods and/or consulting services ex ante, for the most part, as established in the procurement plan.
- 4.8 **Accounting and audit.** The executing agency's financial and accounting system will generate annual financial statements for the program to ensure timely and

reliable administration of transactions, disbursements, and financial records. These reports will be audited and presented to the Bank, through NAFIN, within 120 days after the close of the fiscal year. The audits will be performed by external auditors in accordance with the terms of reference agreed between the Bank and the Ministry of Public Sector Oversight. The borrower will defray the cost of the audits with nonprogram resources.

- 4.9 **Retroactive financing and reimbursement of expenses.** The Bank will recognize as eligible expenses chargeable to the financing outlays in a maximum amount of US\$300 million incurred by SAGARPA since 15 March 2009 in respect of payments to beneficiaries with holdings of up to 10 hectares in the 2009 Spring-Summer cycle.
- 4.10 **Exchange rate.** Given the normal modality for reimbursement of eligible expenses employed by the borrower to request loan disbursements, it is recommended that expenditures in local currency be converted to United States dollars at the rate in effect on the last day of the month prior to the month in which the expenses were incurred, and not the rate in effect on the day on which the disbursement request is processed by the Bank (document GN-2415). Adopting this method will allow the executing agency and the Bank to know in advance the dollar equivalent of the requests presented to the Bank, and also ensure greater efficiency and timeliness in preparation and presentation of disbursement requests. The policy (document GN-2415) applies only to the rate of exchange being used for purposes of project/executing agency internal administration when expenses in local currency are converted to the currency of the operation. The exchange rate used by the Bank for accounting purposes or for its records will not be affected.

## **B. Monitoring and evaluation system**

### **1. Monitoring**

- 4.11 To ensure timely detection and resolution of program operating problems, ASERCA will use information generated by its financial accounting system, which will be linked to the database with the georeferenced and updated list of beneficiaries (paragraph 2.3). This interaction will make it easier to monitor such aspects of the operation as beneficiary behavior and transfers completed. The program will use this information together with the Results Matrix (Annex II) to monitor the program. The executing agency will submit to the Bank a final program report that will serve as input for the Project Completion Report (PCR). This report will describe the physical progress of the program and its outcomes, as well as progress with respect to the indicators measured during the period covered by the Results Matrix (Annex II), lessons learned during the design stage, and implementation of the program.

### **2. Evaluation**

- 4.12 The impact evaluation will help determine: the impact of PROCAMPO transfers on the level, volatility, and capacity to generate income (multiplier effects) for

beneficiaries, as well as the impact on investment decisions. Also, the evaluation will compare the heterogeneity of impact by region, type of producer, and size of holding. It is expected that the evaluation will help determine the specific benefits of PROCAMPO and its marginal effects based on the amount received and the mechanisms used to produce the impacts, analyze targeting, and generate information to review restrictions to trade and market access. The evaluation will be financed with program resources (Component III) and nonreimbursable technical-cooperation funding. The evaluation plan is summarized in Annex IV.

- 4.13 The evaluation will be based on a counterfactual scenario, identifying a control group of producers that will make it possible to represent a situation without PROCAMPO, and to analyze its impact. INEGI will identify a sample of producers, using the 2007 agrarian census, as representative of producers as a whole, broken down by socioeconomic region, type of land ownership, holding size, and access to irrigation. The number of required observations will range from 9,000 to 12,000 equally distributed between beneficiaries and control group.<sup>9</sup>
- 4.14 The information will be generated by means of an ad hoc survey with a questionnaire providing detailed information on production and marketing, socioeconomic characteristics, and the producers' economic activities. The first round of surveys in 2009 will establish the baseline; the second round in 2011 will include a follow-up survey to develop a data panel (between 18,000 and 24,000 surveys in total). In addition, between 1,200 and 1,500 surveys will be conducted at the community level. The surveys will be performed by a consulting firm hired as indicated in previously agreed terms of reference. To estimate the impact, a combination of non-experimental techniques will be used, especially a combination of *propensity score matching* and *differences-in-differences (diff-in-diff)*. ASERCA will hire two specialists, who will be supported by highly qualified consultants, to supervise the tasks of data collection and analysis.

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<sup>9</sup> These are preliminary calculations using the methodology proposed by Grosh and Muñoz (1996) and the World Bank (1997), as well as income data from the 2006 National Survey of Income and Expenditures (ENIGH). A confidence limit of 95%-99%, was used, together with a correlation between clusters of 0.05, and an attrition adjustment of 8%-10%.

**FARMERS DIRECT SUPPORT PROGRAM  
(ME-L1041)  
RESULTS MATRIX**

<b>Goal: (Project objectives) Help improve the beneficiary producers' income by increasing earning levels and reducing fluctuations due to price variations and other types of contingencies.</b>				
<b>Indicators</b>	<b>Baseline (2009)</b>	<b>Target (2011)</b>	<b>Means of verification</b>	<b>Comments/Assumptions</b>
Sum of the agricultural and nonagricultural income of households associated with producer units.	<p>The level of total income (a) and income from agricultural activities (b) of households associated with the producer units in Mexico (Source: PROCAMPO Survey, GEA, 2006).<sup>1</sup></p> <p>Low stratum; (a) \$44,669; (b) \$14,610 Middle stratum; (a) \$65,821; (b) \$54,166 High stratum; (a) \$115,693; (b) \$99,146 Total: (a) \$ 48,437; (b) \$ 20,973.</p>	<p>The difference between the change in average income of beneficiary households and the change in average income of nonbeneficiary households is equal to (or greater than) 1.17 times the amount of the transfers received by the beneficiaries:</p> $\left(\bar{Y}_{2011}^B - \bar{Y}_{2009}^B\right) - \left(\bar{Y}_{2011}^{NB} - \bar{Y}_{2009}^{NB}\right) \geq 1.17 \times TR$	Ad hoc surveys of producer units with an agricultural and household income module (Baseline = 2009; Target 2011).	<p><i>Comment</i></p> <ul style="list-style-type: none"> <li>▪ The evaluation survey is needed to establish a more precise baseline.</li> </ul> <p><i>Assumptions</i></p> <ul style="list-style-type: none"> <li>▪ No dramatic changes to the economic, social, and environmental conditions either nationwide or in rural areas to constrain impact measurements.</li> <li>▪ There are no incentives to induce beneficiaries to decrease the number of hours or the intensity of labor owing to monetary compensation.</li> </ul>
Income variability of farmers.	<p>The coefficient of variability for the 1993-2007 time series using as a deflator the agricultural price index (index of prices to the producer for agricultural activity) is 0.07* (Sources: Banco de Mexico, ASERCA Support Coordination Unit).<sup>2</sup></p> <p><i>* The values will be recalculated based on the 2009 ad hoc survey.</i></p>	<p>The difference between the change in the average coefficient of variability of beneficiary households and the change in the average coefficient of variability of nonbeneficiary households is less than zero, which means that the income variability of PROCAMPO beneficiaries is less than that of nonbeneficiaries.</p> $\left(\left(\frac{\sigma}{\mu}\right)_{2011}^B - \left(\frac{\sigma}{\mu}\right)_{2009}^B\right) - \left(\left(\frac{\sigma}{\mu}\right)_{2011}^{NB} - \left(\frac{\sigma}{\mu}\right)_{2009}^{NB}\right) < 0$		

<sup>1</sup> Study on the performance of the Farmers Direct Support Program (PROCAMPO), farming year 2006, Final Report. Associated Economists Group (GEA) (2006): <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1559788>

<sup>2</sup> Calculations using data from the ASERCA Support Coordination Unit and Banco de México.

<b>COMPONENT 1: Operational improvement of PROCAMPO</b>					
<b>Outcome</b>	<b>Indicators</b>	<b>Baseline (2009)</b>	<b>2010</b>	<b>Target (2011)</b>	<b>Comments/ Assumptions</b>
Greater operating efficiency for the PROCAMPO program	(i) Reduction in the average administrative cost for PROCAMPO per support \$. (ii) Reduction in the number of days for processing, generating, distributing, and collecting payments.	(i) MXN\$8.17 per transaction  (ii) 66 days per transfer		(i) MXN\$4.12 per transaction  (ii) 33 days per transfer	Means of verification: ASERCA database and operational data from PROCAMPO
1. Georeferenced and updated list of holdings/ beneficiaries.	(i) Number of states with an updated and georeferenced list  (ii) Percentage of holdings with updated digital and physical records (iii) Percentage of verified beneficiaries	(i) 0 states  (ii) 0 holdings  (iii) 0 beneficiaries	(i) 10 states georeferenced  (ii) 2.2 million holdings  (iii) 1.3 million beneficiaries	(i) 32 states georeferenced  (ii) 4.1 million holdings  (iii) 2.7 million beneficiaries	Means of verification: Information provided by the ASERCA Support Coordination Unit
2. Bankarization and integral payments platform.	(i) Percentage of operations transferred by means of ASERCA-SAGARPA debit card.  (ii) Percentage of support amount transferred by means of ASERCA-SAGARPA debit card.  (iii) Percentage of banked PROCAMPO beneficiaries  (iv) Annual average days to process payments, generate, distribute and collect via checks and deposits.	(i) 31% of operations are banked in 2008.  (ii) 38.5% of amount transferred in 2008  (iii) 31% of beneficiaries are banked in 2008.  (iv) 43 days for check transfers in 2008 and 18 days for deposits.		(i) 85% of operations are banked.  (ii) 85% of amount transferred by means of ASERCA debit card  (iii) 85% of beneficiaries are banked.  (iv) At least a 12% reduction in the total processing time compared to the improvement in 2007.	Means of verification: Information provided by the ASERCA Support Coordination Unit

COMPONENT 2. Direct transfers to producers					
Outcome: Final	Indicators	Baseline (2009)	2010	Target (2011)	Comments/ Assumptions
Enhanced productivity in producer units	Yield/hectare for main crops.	<p>Yield per hectare of the main food crops at the nacional level (Source: Agrifood and Fishing Information System).<sup>3</sup>*</p> <p>Corn: 3.206 tn/ha Sorghum: 3.495tn/ha Wheat: 5.082 tn/ha Beans: 0.667 tn/ha Barley: 2.281 tn/ha Rice: 4.154 tn/ha Cotton: 3.485 tn/ha Soybean: 1.421 tn/ha</p> <p><i>* The values will be recalculated based on the 2009 ad hoc survey.</i></p>		<p>The difference between the percentage change in the average yield/hectare of beneficiaries and the percentage change in the average yield/hectare of nonbeneficiaries is equal to (or greater than) 15%:</p> $\left( \frac{\overline{R}_{2011}^B - \overline{R}_{2009}^B}{\overline{R}_{2009}^B} \right) - \left( \frac{\overline{R}_{2011}^{NB} - \overline{R}_{2009}^{NB}}{\overline{R}_{2009}^{NB}} \right) \geq 15\%$	<p><i>Means of verification:</i> Ad hoc surveys of producer units with an agricultural and household income module (Baseline = 2009; Target 2011)</p> <p><i>Assumptions:</i></p> <ul style="list-style-type: none"> <li>No dramatic changes to the economic, social, and environmental conditions either nationwide or in rural areas to constrain impact measurements.</li> <li>There are no incentives to induce beneficiaries to decrease the number of hours or the intensity of labor owing to monetary compensation.</li> </ul>

<sup>3</sup> See statistical appendix in document <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=2020681>.

Outcomes: Intermediate	Indicators	Baseline (2009)	2010	Target (2011)	Comments/Assumptions
Channels created to enhance productivity and increase the income of beneficiaries and reduce liquidity constraints.	(i) Probability of making agricultural and nonagricultural productive investments	(i) 45% of rural households have made productive investments (Davis <i>et al.</i> , 2005). <sup>4*</sup>		<p>(i) The difference between the change in the average probability of beneficiaries making investments and the change in the average probability of nonbeneficiaries doing so is equal to (or greater than) 30%:</p> $\left( \frac{\overline{PI}_{2011}^B - \overline{PI}_{2009}^B}{\overline{PI}_{2009}^{NB}} \right) - \left( \frac{\overline{PI}_{2011}^{NB} - \overline{PI}_{2009}^{NB}}{\overline{PI}_{2009}^{NB}} \right) \geq 30\%$	<p><i>Means of verification:</i> Ad hoc surveys of producer units with an agricultural and household income module (Baseline = 2009; Target 2011)</p> <p><i>Assumptions:</i></p> <ul style="list-style-type: none"> <li>▪ No dramatic changes to the economic, social, and environmental conditions either nationwide or in rural areas to constrain impact measurements.</li> <li>▪ There are no incentives to induce beneficiaries to decrease the number of hours or the intensity of labor owing to monetary compensation</li> </ul>

<sup>4</sup> Davis, Benjamin, Sudhanshu Handa, Marta Ruiz, Arranz, Marco Stampini and Paul Winters (2005), "Agricultural Subsidies, Human Capital Development and Poverty Reduction: Evidence from Rural Mexico", Working paper OVE/WP-03.

Outcomes: Intermediate	Indicators	Baseline (2009)	2010	Target (2011)	Comments/Assumptions
	(ii) Probability of applying agricultural inputs	(ii) Use of inputs: -Fertilizers: 65% - Pesticides: 46% - Improved seed: 11% (Yunez-Naude <i>et al.</i> 2006). <sup>5*</sup>		(ii) The difference between the percentage change in the average probability of beneficiaries applying inputs and the percentage change in the average probability of nonbeneficiaries doing so is equal to (or greater than) 20%: $\left( \frac{\overline{PN}_{2011}^B - \overline{PN}_{2009}^B}{\overline{PN}_{2009}^B} \right) - \left( \frac{\overline{PN}_{2011}^{NB} - \overline{PN}_{2009}^{NB}}{\overline{PN}_{2009}^{NB}} \right) \geq 20\%$	
	(iii) Value of inputs applied per hectare	(iii) Value of inputs, 8,000 pesos per ha. (Yunez-Naude <i>et al.</i> 2006).*		(iii) The difference between the percentage change in the average value of the inputs applied by beneficiaries and the percentage change in the average value of the inputs applied by nonbeneficiaries is equal to (or greater than) 10%: $\left( \frac{\overline{I}_{2011}^B - \overline{I}_{2009}^B}{\overline{I}_{2009}^B} \right) - \left( \frac{\overline{I}_{2011}^{NB} - \overline{I}_{2009}^{NB}}{\overline{I}_{2009}^{NB}} \right) \geq 10\%$	

<sup>5</sup> Yunez-Naude, Antonio , Miriam Juarez-Torres, and Fernando Barceinas-Paredes, (2006) "Productive Efficiency in Agriculture: Corn Production in Mexico" Poster paper prepared for presentation at the International Association of Agricultural Economists Conference, Gold Coast, Australia, August 12-18, 2006.



Outputs	Indicators	Baseline (2009)	2010	Target (2011)	Comments/ Assumptions
	(iv) Percentage of production for own consumption versus production sold of main crops	(iv) 52% of the corn production of farmers who have 0-5 hectares is for own consumption, compared to 13% for farmers with more than 5 hectares (Foro en defensa del maíz, 2002). <sup>6*</sup>  <i>* The values will be recalculated based on the 2009 ad hoc survey.</i>		(iv) The difference between the percentage change in average production of beneficiaries to be sold and the percentage change in average production of nonbeneficiaries to be sold is equal to (or greater than) 10%  $\left( \frac{\bar{V}_{2011}^B - \bar{V}_{2009}^B}{\bar{V}_{2009}^B} \right) - \left( \frac{\bar{V}_{2011}^B - \bar{V}_{2009}^B}{\bar{V}_{2009}^{NB}} \right) \geq 10\%$	
Additional income transferred through direct support to farmers or eligible producer units of up to 10 hectares.	(i) Percentage and quantity of support delivered before and after planting	(ia) MXN\$13.491 million were transferred annually to farmers with up to 10 ha. (Source: ASERCA Support Coordination Unit)  (ib) Support was provided to 2,110,685 farmers with up to 10 has.	(ia) The levels of transfers to farmers with up to 10 ha in 2009 is at least maintained  (ib) The number of farmers with up to 10 has that received program support in 2009 is maintained. <sup>7</sup>	(ia) The levels of transfers to farmers with up to 10 ha in 2009 is at least maintained  (ib) The number of farmers with up to 10 has that received program support in 2009 is maintained. <sup>8</sup>	<i>Means of verification:</i> ASERCA database and PROCAMPO operational data  <i>Assumptions:</i> ▪ Macroeconomic conditions in the country guarantee that the program's budget allocations are sufficient to meet the programmed targets.

<sup>6</sup> Foro de Defensa del Maíz (2002):  
<http://www.foroendefensadelmaiz.galeon.com/productos365415.html>

<sup>7</sup> The process of updating and cleaning up the list of PROCAMPO beneficiaries provided for in component 1 is expected to have the effect of updating the information on holdings, which in two years could be reduced overall by around 10%.

<sup>8</sup> The process of updating and cleaning up the list of PROCAMPO beneficiaries provided for in component 1 is expected to have the effect of updating the information on holdings, which in two years could be reduced overall by around 10%.

<b>COMPONENT 3. Impact evaluation of PROCAMPO's direct support program</b>						
<b>* Note: This component includes a column for 2012, because the information on farming year 2011 will be compiled that year. The impact evaluation report will therefore be completed in 2012.</b>						
<b>Outcome</b>	<b>Indicators</b>	<b>Baseline (2009)</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Comments/ Assumptions</b>
Establishment of instruments to analyze program impact, heterogeneity of the impact, and the microeconomic mechanisms through which it operates.	(i) Final evaluation report on program impact	(i) 0			(i) 1 evaluation report	<i>Means of verification:</i> Submittal of report to the Bank
<b>Outputs</b>	<b>Indicators</b>	<b>Baseline (2009)</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Comments/ Assumptions</b>
1. Establishment of a baseline in 2009 with a representative group of beneficiaries and a control group.	(i) First database of 10,000 producer units <sup>9</sup> (ii) Report on the baseline for farming year 2009	(i) 0 (ii) 0	(i) 1 database with information on farming year 2009. (ii) 1 report on the baseline			<i>Means of verification:</i> Delivery of the databases to the Bank and submittal of the report to the Bank
2. Monitoring survey	(i) Second database of the 10,000 producer units surveyed in the baseline. (ii) Report on the monitoring survey on farming year 2011	(i) 0 (ii) 0			(i) 1 database with information on farming year 2011 (ii) 1 report on the monitoring survey	<i>Means of verification:</i> Submittal of the databases to the Bank
3. Dissemination of the program's normative instruments and results of the impact evaluation	(i) Final report with the impact evaluation upon program completion.	(i) 0			(i) Final evaluation report	<i>Means of verification:</i> Submittal of report to the Bank

NOTE: Since PROCAMPO does not have baseline data; the baseline indicators were obtained from secondary sources and other previous studies. These data need to be verified through the baseline survey that will be administered in 2010 on 2009 information from farmers.

<sup>9</sup> This is an estimate based on preliminary calculations using information available in the 2006 National Survey on Income and Expenditures (ENIGH).

**FARMERS DIRECT SUPPORT PROGRAM (ME-L1041)**

**SUMMARY PROCUREMENT PLAN**

Ref. No.	Category and description of the procurement contract	Estimated cost of procurement	Procurement method*	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Tentative dates		Status (pending, in process, awarded, canceled)	Comments
					IDB	Local / other %		Publication of specific procurement notice	Completion of contract		
1	CONSULTING SERVICES										
INDIVIDUAL CONSULTANTS 2009											
	Consultancy 1 - Individual consultants in national scientific advising on the program evaluation for ASERCA  Estimated cost: US\$120,000	120,000 <sup>1</sup>	NICQ	Ex post	100	0	No	2nd half 2009	1st qtr 2011	Pending	The first individual consulting contract will be subject to ex ante review.
	Consultancy 2 - Individual consultants in national scientific advising on the program evaluation for ASERCA  Estimated cost: US\$100,000	100,000	NICQ	Ex post	100	0	No	4th qtr 2010	4th qtr 2011	Pending	
TOTAL INDIVIDUAL CONSULTANTS		220,000									

<sup>1</sup> This does not specify the line item for contingencies contained in the budget for evaluation spending in the first year, which was initially estimated at US\$50,000; if there are no contingencies, those funds can be used in component II of the project.

Ref. No.	Category and description of the procurement contract	Estimated cost of procurement	Procurement method*	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Tentative dates		Status (pending, in process, awarded, canceled)	Comments
					IDB	Local / other %		Publication of specific procurement notice	Completion of contract		
CONSULTING FIRMS 2009-2010											
	Consultancy 1. Direct contracting of INAP: Definition of the organization and ASERCA-SAGARPA collaboration arrangement, and process design and reengineering in the bankarization and integrated payment system component	565,000	SSS	Ex ante	100	0	NO	1st qtr 2010	1st qtr 2011	Pending	Direct contracting of INAP was provided for in the loan contract.
	Estimated cost: US\$565,000 Consultancy 2. Reengineering the database to orient it towards the beneficiary in the bankarization and integrated payment system component	345,000	QCBS	Ex post	100	0	NO	1st half 2010	1st half 2011	Pending	
	Estimated cost: US\$345,000 Consultancy 3. Development of the integrated payment system	585,000	QCBS	Ex post	100	0	NO	1st half 2011	2nd half 2011	Pending	
	Estimated cost: US\$585,000 Consultancy 4 - Direct contracting of INEGI: design and implement the georeferencing plan	35,000,000	SSS	Ex ante	100	0	No	2 <sup>nd</sup> half 2009	4 <sup>th</sup> qtr 2011	Pending	Direct contracting of INEGI was provided for in the loan contract.
	Estimated cost: US\$35 million										

Ref. No.	Category and description of the procurement contract	Estimated cost of procurement	Procurement method*	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Tentative dates		Status (pending, in process, awarded, canceled)	Comments
					IDB	Local / other %		Publication of specific procurement notice	Completion of contract		
	Consultancy 5 - Contracting a consulting firm to manage the baseline and monitoring surveys (10,000 farmers per round), <sup>2</sup> as well as the surveys at the community and market levels.  Estimated cost: US\$3.8 million	3,800,000	QCBS	Ex ante	100	0	NO	2nd half 2009	1st half 2012	Pending	
	Consultancy 6 – Consulting firm to analyze the baseline for the PROCAMPO impact evaluation  Estimated cost: US\$100,000	100,000	QCBS	Ex ante	100	0	NO	1st half 2010	4th qtr 2011	Pending	
<b>TOTAL CONSULTING FIRMS</b>		<b>40,395,000</b>									
<b>TOTAL PROCUREMENT PLAN 18 MONTHS</b>		<b>40,615,000</b>									

**Goods and Works:** **ICB:** International competitive bidding; **LIB:** Limited international bidding; **NCB:** National competitive bidding; **PC:** Price comparison; **DC:** Direct contracting; **FA:** Force account; **PSA:** Procurement through specialized agencies; **PA:** Procurement agents; **IA:** Inspection agents; **PLFI:** Procurement in loans to financial intermediaries; **BOO/BOT/BOOT:** Build, own, operate / Build, operate, transfer / Build, own, operate, transfer; **PBP:** Performance-based procurement; **PLGB:** Procurement under loans guaranteed by the Bank; **CPP:** Community participation procurement; **Consulting firms:** **QCBS:** Quality- and cost-based selection; **QBS:** Quality-based selection; **FBS:** Fixed budget selection; **LCS:** Least-cost selection; **CQS:** Selection based on the consultants' qualifications; **SSS:** Single-source selection. **Individual consultants:** **NCQS:** Selection based on the national consultants' qualifications; **IICQ:** Selection based on the international consultants' qualifications.

<sup>2</sup> The sample will be designed under direct contracting with INEGI using the 2007 Agricultural Census as the sample framework, which will be covered through nonreimbursable technical-cooperation funding. Another consulting firm may be contracted to administer the sample and enter the data.

## **SUMMARY OF EVALUATION ARRANGEMENTS PROCAMPO IMPACT EVALUATION 2009-2011**

PROCAMPO was designed in the early 1990s to run for a 15-year period in order to compensate Mexican farmers for the expected drop in the price of nine food crops from implementation of the North American Free Trade Agreement (NAFTA). The original design has been modified, and the PROCAMPO that is being executed starting in 2009 must therefore be seen as a program of direct transfers that are not tied to production decisions, aimed at boosting farmers' income and reducing their income variability. The operating rules for the new PROCAMPO differ in some respects (transfer amounts per hectare for small farmers, caps on transfers per farmer) from those in place through 2008.

The cash transfers provided to farmers through PROCAMPO are expected to have an impact on the beneficiaries' income that exceeds the transfer amount, thus having a multiplier effect. The specialized literature on analysis of untied transfer programs identifies several reasons why this multiplier effect can be achieved, including: (i) cash transfers ease liquidity constraints, which are a typical problem for a large number of Mexican farmers due to limited access to financing, thereby facilitating spending and/or investment in productive activities that could not be financed; (ii) the transfers provide a minimum income and reduce the beneficiaries' total income variability, and risk-averse economic agents (like farmers, typically) are known to increase spending and investment as their income level rises and their income variability drops; and (iii) the transfers increase liquidity and can have an effect on the allocation of family work between agricultural and nonagricultural activities.

The evaluation that will be performed seeks to estimate PROCAMPO's impact on family and/or producer unit income, using broad indicators, such as current income, and to identify and quantify the mechanisms through which that effect is achieved, using indicators on credit, investment, production-related spending, allocation of work, and land use, among others. It will also aim to estimate the impact of these changes on farmers' productivity and competitiveness.

The impact of PROCAMPO and the mechanisms through which it is generated are expected to be heterogeneous and to vary by region, type of land tenure (*ejidatarios*, tenant farmers, owners), size of the producer unit, access to irrigation and markets, and interaction with other government programs. The impact evaluation must analyze those interactions and complementarities, thereby producing results that will be very useful in designing policies and programs.

### **Methodological proposal and data collection**

The proposed methodology for the impact evaluation is propensity score matching combined with double difference.<sup>1</sup> This requires putting together panel data composed of a baseline for 2009 and a survey to monitor those same producer units two years later. These are standard methods for impact evaluations when there is no experimental evaluation design but when a control group can be identified using observable

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<sup>1</sup> This does not rule out the possibility of using alternative econometric methods in the event statistically representative control groups cannot be identified for all producer strata.

characteristics of the beneficiaries and nonbeneficiaries. The advantage of having two points in time and applying this methodology is that it controls for initial differences and trends over time, as well as for the possibility of there being nonobservable differences that are constant over time between the beneficiary and control groups (Ravallion, 2005), substantially enhancing the quality of the evaluation results.

The data will be collected through a detailed survey gathering information on all aspects of agricultural production and marketing and on other relevant economic activities and the socioeconomic characteristics of the producer unit. Since the study's unit of analysis is the producer unit, there will have to be the option of administering different questionnaires to different types of producer units. For example, decision-making for small farmers can be expected to take place at the household level, while farmers with larger holdings may have a decision-making process similar to that of a company; the questionnaires must therefore be adjusted to obtain the necessary information in each case. The surveys will be given to a representative group of PROCAMPO beneficiaries and to a control group, in order to establish a counterfactual scenario that will make it possible to estimate the impact on the different indicators that is attributable to the program. The producer units that are not PROCAMPO beneficiaries must have the same range of characteristics as the beneficiary units, to ensure that the impact can be identified and that the effects associated with the different transfer amounts can be analyzed. "Community surveys" will also be conducted to complement and corroborate the information garnered through the producer surveys. They will be administered to community leaders, who are expected to have considerable information on living conditions, activities performed, and market operation in the area.<sup>2</sup> The cost of a community survey is basically the same as for a producer unit survey.

The sample for the baseline will be taken from the 2007 Agricultural Census. In addition to including beneficiary and nonbeneficiary producers, it will be stratified by the socioeconomic regions of the country (INEGI uses six regions), type of land tenure (*ejidatarios* and *non-ejidatarios*), producer unit size, and access to irrigation. The sample will be representative of each of these stratifications, but not of them combined, since that would require an excessively large sample; this will allow for a separate analysis of PROCAMPO's impact in each of these categories.

The possibility of the survey sample being representative of all the agricultural producer units in the 2007 Agricultural Census will be examined, in order to have a broad analysis of agricultural production in Mexico, without deviating from the impact evaluation's core purpose.

### **Implementation of the evaluation proposal**

INEGI will be asked to design the sample, based on the 2007 Agricultural Census, using the sampling framework established by the evaluation team. Specifically the size of the required sample will be estimated in multiple phases,<sup>3</sup> taking into account the

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<sup>2</sup> "Communities" are understood here as the enumeration units defined by INEGI used in the sampling.

<sup>3</sup> The sample would be obtained in two stages. In the first, a random sample of the enumeration areas (defined by INEGI) is selected for the region. In the second, the farmers are selected (following the stratification rules outlined above).

stratification mentioned earlier, correcting for the presence of clusters, considering attrition errors, and using the interest indicator that has the greatest variation, to thus ensure the sample is the appropriate size.<sup>4</sup> Specifically the sample will be calculated so that the confidence limit for the results is 95% and the attrition adjustments are between 8% and 10%, with a minimum correlation between clusters of 0.05. The number of observations of the sample will be divided between the control group and the PROCAMPO beneficiary group.

The Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA) will coordinate the evaluation, with support from external consultants, one of whom will serve as “project leader”. The team will have a Steering Committee, with representatives of CONEVAL, ASERCA, SAGARPA, and the IDB. The Bank will support this process by hiring an external advisor to provide technical assistance throughout the evaluation process, in addition to the support provided by the project team and Strategy Development Division (SPD/SDV) staff that participated in designing the evaluation.

The estimated cost per survey is approximately US\$160 per completed form. Therefore, the estimated cost of the surveys of agricultural producer units will be US\$1.6 million per round, including survey administration and data entry costs. The total cost of collecting data will be approximately US\$4.1 million—US\$3.2 million for administration and data entry for the two producer survey rounds and US\$900,000 for preparing surveys, verifying questionnaires, conducting pilot tests, and administering community surveys; analysis costs are estimated at approximately US\$400,000. The evaluation’s total cost, including data collection, scientific oversight, and analysis, will be US\$4.9 million, of which US\$410,000 will be covered by parallel technical-cooperation funding that will be used primarily to finance activities in 2009—analyzing existing data, designing the forms, designing the sample, and conducting pilot tests—and the costs of the international scientific advisor.

The survey will be conducted by a consulting firm/group that specializes in evaluation and surveys in rural areas, to be identified and hired by SAGARPA in accordance with applicable rules.

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<sup>4</sup> Preliminary calculations using the methodology proposed by Grosh and Muñoz (1996) and the World Bank (1997) and income data from the 2006 National Survey on Interest and Expenditures (ENIGH) suggest a sample of 9,000-12,000 observations.



## REFERENCES

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