

Mexican agricultural policy: Multiple goals and conflicting interests

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The Mexican government's farm policy is sharply biased against low-income producers. Senior agricultural policymakers are very explicit about giving large growers priority. They relegate peasant farmers to social welfare programs, rather than considering them to be appropriate targets for economic development. Indeed, Mexico's Agriculture Secretary recommended to congress that his ministry should cut funding for its only program that ostensibly targets investment support to low-income producers because other producers suggest "that we separate those who are economically viable from those who should be addressed with more of a social welfare approach."²

The idea that agricultural policy should give up on investing in low-income producers is reinforced by economists' view that Mexican agriculture sector has too much employment, considering its share of the economy. In the early 1990s, NAFTA advocates recognized that opening to imports of subsidized US grain would displace hundreds of thousands of small farmers, who were expected to find jobs in industry or urban services. As it turned out, Mexico's cities generated much less employment than was predicted (Uchitelle 2007). Instead, much of the rural population that economists considered to be surplus ended up working in the US. Mexico's rate of outmigration increased sharply between 1991 and 2000, from an estimated 337,000 to 530,000 annually (Passell and Suro 2005). Not coincidentally, Mexico's total number of agricultural jobs fell 20% between 1991 and 2007, according to the agricultural census (Scott, this volume).

Nevertheless, the government spent substantially on the grain and oilseed sector during this period, including *at least US\$20 billion* (in 2009 dollars) in direct farm subsidy payments since 1994.³ In addition, the agricultural share of Mexico's budget was the highest in Latin America during the 1990s, the most recent period for which comparative data are available (Gómez Oliver 2007). This report asks: where did these subsidies go? The government's public information access reforms make it possible to see the broad patterns. Yet it remains difficult to determine "who gets what" with precision because of the government's presentation of the official farm subsidy data, which understates the degree to which public resources are concentrated in few hands (Haight and Fox, this volume). Moreover, official data sources all ignore one of the main problems with Procampo, the farm subsidy program that is supposed to reach smallholders - the majority of low-income producers turn out to be excluded from its modest benefits (see Tables 2 and 3, below). At least one pattern is very clear, however: the principal criteria for allocating farm subsidies have not included the promotion of agricultural employment.

1. AGRICULTURAL AND RURAL DEVELOPMENT POLICY CONTEXT

The displacement of Mexico's peasant farmers is far from new. Public spending in agriculture has long favored medium and large producers, and the policy reforms of the 1990s appear to have accentuated this underlying trend. Mexico's most sustained period of pro-peasant rural economic policy was during the Cárdenas presidency of the 1930s, when the agrarian reform redistributed a substantial share of commercial farmlands and invested in the productive capacity of the new social sector. After the balance of power within the ruling party shifted, however, agrarian reform was put on the back burner. Beginning in the 1940s, government agricultural spending was concentrated in large investments in irrigation infrastructure as well as subsidized credit and inputs, which primarily benefited commercial farms in northern Mexico (Barkin and Suárez 1982). Public investment in agricultural research and technology was also biased against smallholders - as in the well-known case of Mexico's Green Revolution, which prioritized irrigated wheat over rainfed corn (Hewitt de Alcántara 1976). Meanwhile, Mexico's rainfed agriculture is widely seen to have subsidized Mexico's rapid mid-century urbanization and industrialization through unfavorable terms of trade. During what was once called the "Mexican Miracle," the decades-long growth of the industrial labor force did indeed encourage workers to migrate to the cities, but this process was reinforced by a push factor as well - the exclusion of rainfed smallholders from the benefits of public investment.

² Secretary Francisco Mayorga: "Looking at rural development, there we have a Subsecretariat and I would say that today it's a bit superfluous given that there are so many other agencies have social programs such as the Ministry of Social Development, the National Indigenous Development Commission, Popular Health [insurance], etc. In addition, the producers keep proposing that we separate those who are economically viable from those who should be addressed with more of a social welfare approach. So my proposal, respectfully, and here obviously you the legislators, the Treasury Ministry and the President have the last word, is to shrink the Rural Development Subsecretariat to shift resources to the areas that we see as weaker." Comunicación Social - Cámara de Senadores (2009)

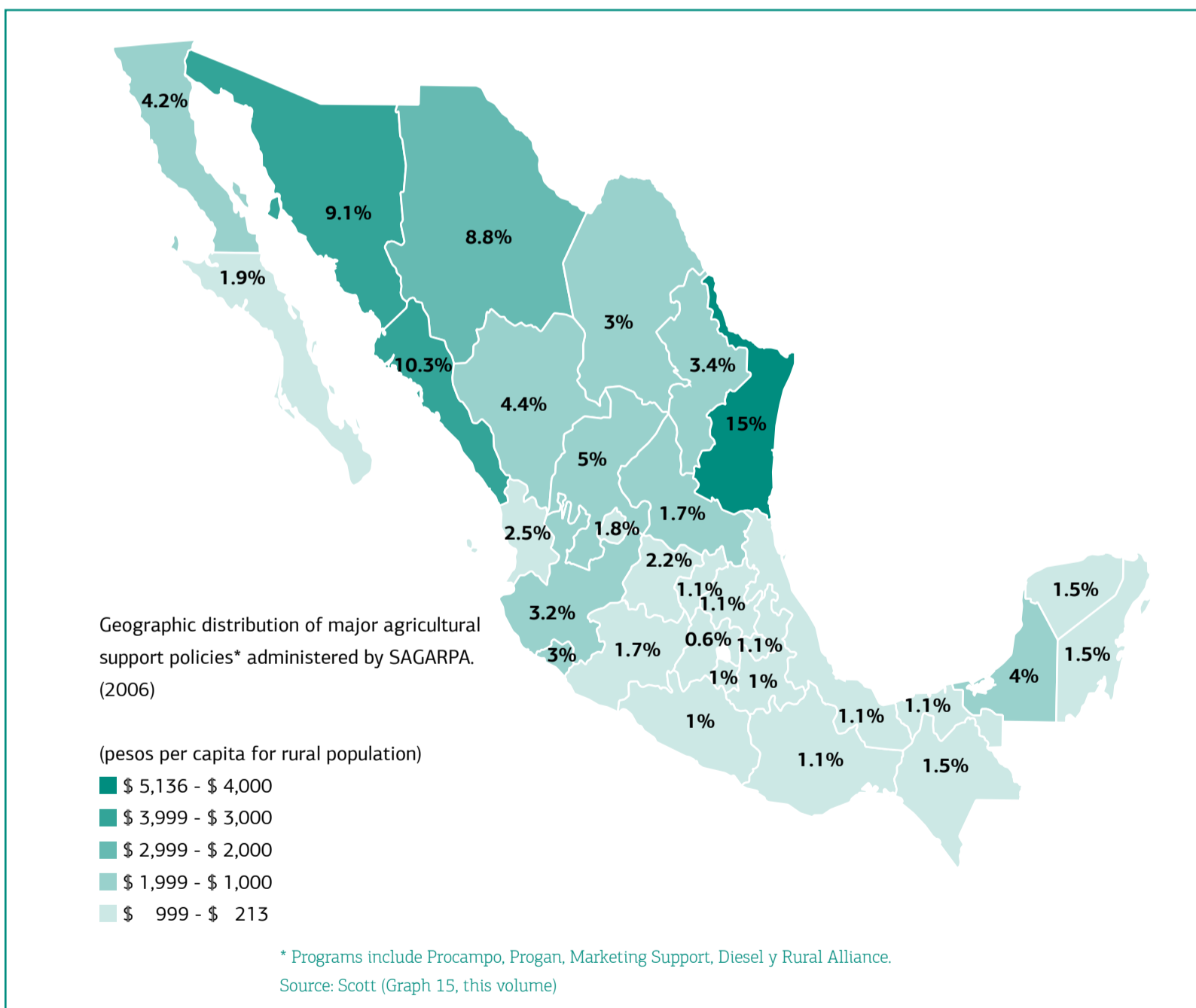
³ This total is limited to the two largest direct farm payment programs, Procampo and Ingreso Objetivo. To calculate total spending, individual annual payments over the history of Procampo and Ingreso Objetivo were deflated to their 2009 peso value. Their 2009 value was then converted to dollars using the average exchange rate to Mexican peso to US dollar over the year 2009. See Graph 1 below for more general agricultural budget trends.

By the early 1970s, the Mexican government's political legitimacy was widely questioned in the countryside. Policy reforms began to extend access to subsidized credit, inputs, support prices and rural infrastructural investments to more peasant producers (Grindle 1977, Gordillo 1988a, 1988b). This approach was pursued most strategically during the oil boom, with the Mexican Food System (1980-1982). During most of this 1971-1982 period of increased government rural development spending, subsidies for farm credit outweighed input and price subsidies (Gordillo 1990). But these pro-peasant reform initiatives only attempted, with limited success, to incorporate more small farmers into the existing system, which remained biased in favor of well-off growers.⁴

By the 1980s and 1990s, Mexico's agricultural structure was composed of four main groups – 1) a small number of well-endowed commercial growers, who control most of the irrigated cropland; 2) a larger segment of small commercial farmers, 3) a large majority of subsistence and sub-subsistence producers who must rely on off-farm family wage labor to complement their tiny rainfed landholdings; as well as 4) a large group of fully landless wage laborers.⁵ Most small-scale agricultural producers lack sufficient access to credit, inputs, markets and agro-ecologically appropriate technology to be able to increase their productivity and generate more employment. Nevertheless, 63% of Mexico's agricultural employment is still on farms of less than 5 hectares, according to the 2007 agricultural census. Yet the large commercial producers, especially those in the northern states, receive a vastly disproportionate share of government farm subsidies, as shown in Map 1 (see also Scott, this volume).

Map 1:

GEOGRAPHIC CONCENTRATION OF AGRICULTURAL SPENDING BY SAGARPA, BY STATE, 2006
(M\$ RURAL PER CAPITA)

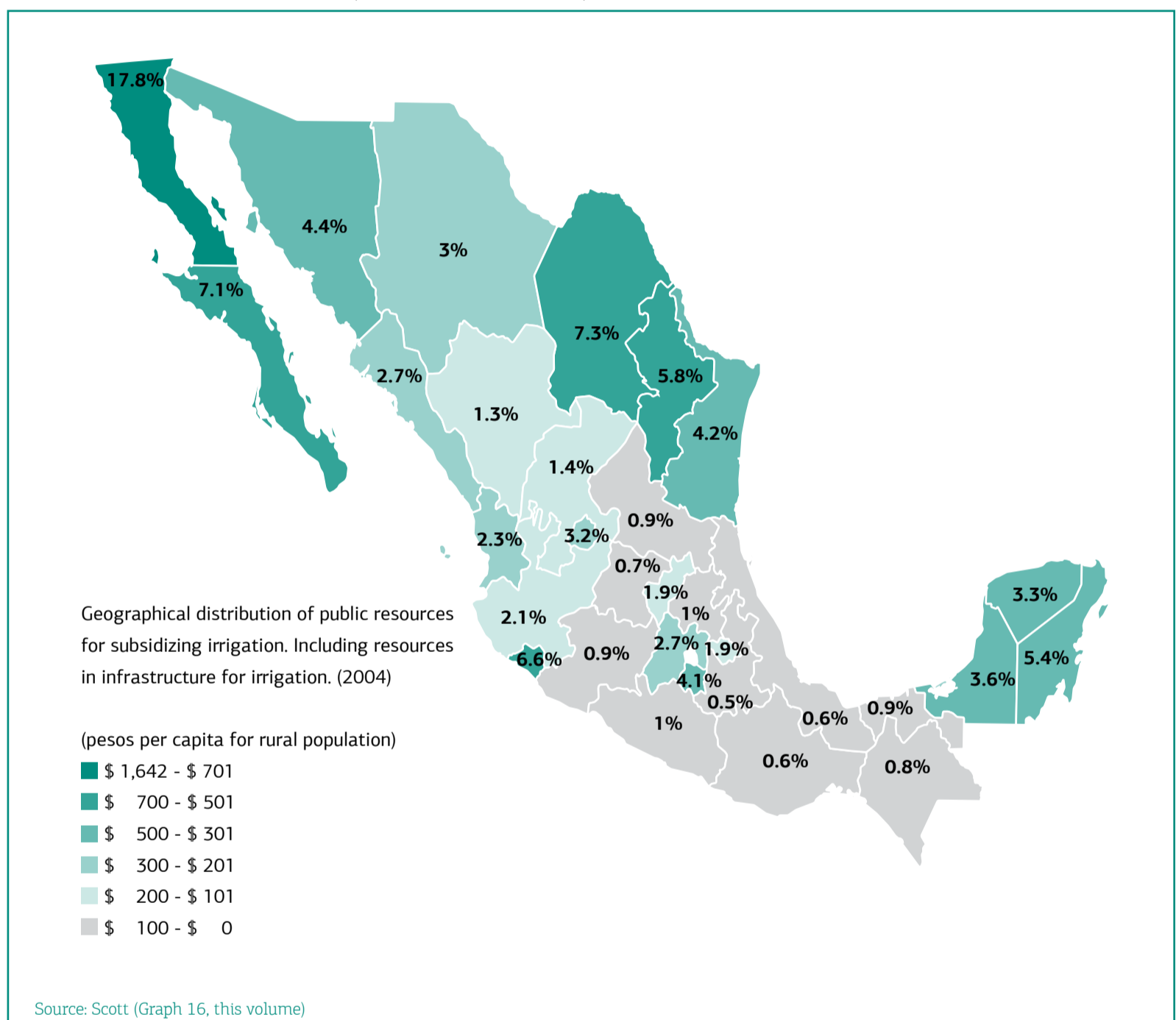


⁴ For more detail, see Fox (1992). For a retrospective of the past 40 years of Mexican rural development policies, see Hewitt de Alcántara (2007).

⁵ Estimates of Mexico's farmworker population range from 3.2 to 3.6 million (data from 1999-2001, in Salinas Álvarez 2006: 48). In part because so many farm-workers are also smallholders, few analysts attempt to estimate how the agricultural population is divided, but Puyana and Romero suggest that in 1993, 45% were producers and 55% were farm-workers (2008: 25).

The polarization of Mexican agriculture between those with and without irrigation is a direct result of a long history of state intervention. Government infrastructure policy determined which producers received irrigation in the first place, and continued massive subsidies for water use reproduced the inequality between those with and without irrigation. Among all of Mexico's farm subsidies, water and electricity are among the most concentrated in a few northern states, as shown in Map 2. (World Bank 2004: 83-84 and Scott, this volume). Pumping for irrigation is the most heavily subsidized use of electricity in Mexico, encouraging highly unsustainable use patterns.⁶ In public debate over farm policy, these massive irrigation subsidies are rarely mentioned -- in part because they do not appear explicitly in the budget as cash transfers, which are the main focus in this report.

Map 2:
GEOGRAPHIC CONCENTRATION OF IRRIGATION SPENDING, BY STATE, 2006
(M\$ RURAL PER CAPITA)



This is the context for Mexico's essentially two track approach to rural development, in which economic policies target agricultural spending mainly to larger, irrigated growers. The vast majority of low income producers, in contrast, are addressed instead with social policies, including low quality basic education and erratic health care, as well as welfare payments such as the well-known Oportunidades program (originally launched as Progresá in 1997). Mexico's pioneering conditional cash transfer (CCT) social program substantially raises the incomes of 5 million low-income families in relative terms (Levy and Rodríguez 2005). Widely-emulated around the world, Mexico's largely rural CCT program is designed to invest in human capital by conditioning regular cash payments to beneficiary families on their increased use of public education and health services. These transfer payments increase family income by an average of 30%. One of Oportunidades' major innovations is that family access to the program is de-

⁶ See Avila et al (2005). The World Bank finds that farmers pay on average 29% of the cost of electricity for irrigation, adding up to MX\$ 8.0 billion in 2006 alone (2009: 27). The report adds that "poor farmers typically do not pump groundwater..." These negative environmental impacts are magnified by the government's large-scale subsidy of agricultural use of diesel fuel.

terminated by technical criteria, through a means test rather than being subject to political discretion -- though this approach was threatened in the fall of 2009 by congressional efforts to turn program management over to governors (e.g., Díaz Cayeros 2009)

The CCT strategy does not attempt to encourage job creation. Instead, its goal is to lift families out of poverty by direct cash transfers in the short term and by improving their children's *future* job prospects in the longer term. However, this approach has not turned into the "magic bullet" for poverty alleviation that some have claimed. Recent reviews of the evidence by both the International Food Policy Research Institute and the World Bank find that while CCT social programs increase the demand for public services, the persistent under-supply of quality, accessible health care and education remains a major constraint on the strategy's potential human capital impact.⁷

Mexico's primary anti-poverty strategy is clearly progressive in terms of who benefits, especially when compared to most other social programs – Oportunidades payments are channeled primarily to the poorest. Yet Oportunidades' impact on inequality is undermined by farm subsidy policy, which both accentuates inequality through its bias towards larger growers and excludes most of the poorest smallholder grain producers, as Scott's chapter shows.⁸ Indeed, a recent World Bank public expenditure review found "agricultural spending is so regressive that it cancels out about half the redistributive impact of rural development spending" (2009b: x).

While Mexico's anti-poverty strategy has relied primarily on income transfer programs since the late 1990s, the recent global economic downturn has revealed the limited reach of the national safety net. Between 2006 and 2008, the share of the rural population considered in acute poverty – those who earn less than enough to buy a minimal diet – increased from 24.5% to 31.2% – and this was *before* the worst of the current economic crisis was felt. The share of the urban population in acute poverty also grew from 7.5% to 10.6%. In other words, acute poverty is three times as extensive in rural as in urban areas, in relative terms. After several years of improvement in the official indicators of acute poverty, as of 2008 it was almost as widespread as it was in 1992.⁹

The federal government's social policy evaluation agency (Coneval) estimated the size of the additional share of the population that would have fallen below the acute poverty line, had it not been for its safety net programs (mainly in rural areas). While a total of 19.5 million Mexicans were found to be in acute poverty in 2008, Coneval found that an additional 2.2 million would have joined them in the absence of federal social programs. This estimate indicates that Mexico's safety net programs kept only ten percent of the poorest population above the acute poverty line.¹⁰

2. FROM SUPPORT PRICES TO DIRECT FARM PAYMENTS

In the context of persistent rural poverty, Mexico's post-NAFTA farm subsidy programs faced the challenge of attempting to meet a long list of goals – some related to compensating commercial producers' expected losses due to the trade opening, while other goals involved creating subsidized alternatives to the government's longstanding policy of offering to buy grain directly from producers. The new farm subsidy programs followed the logic often proposed by free trade advocates. According to mainstream economic theory, while trade liberalization produces more winners than losers, trade adjustment can be made fair by programs that compensate the losers. This principle is more often advocated in theory than actually carried out in practice. In the case of Mexican farm subsidies, however, the government *did* make a substantial, sustained investment in compensatory payments during the 15 years following NAFTA. This report will address who got compensated, and how. Other studies in this report "follow the money" from different perspectives, but first, additional policy context is necessary.

⁷ See Adato and Hoddinott (forthcoming) and Fiszbein and Schady (2009). For the vast official evaluation literature, see www.oportunidades.gob.mx.

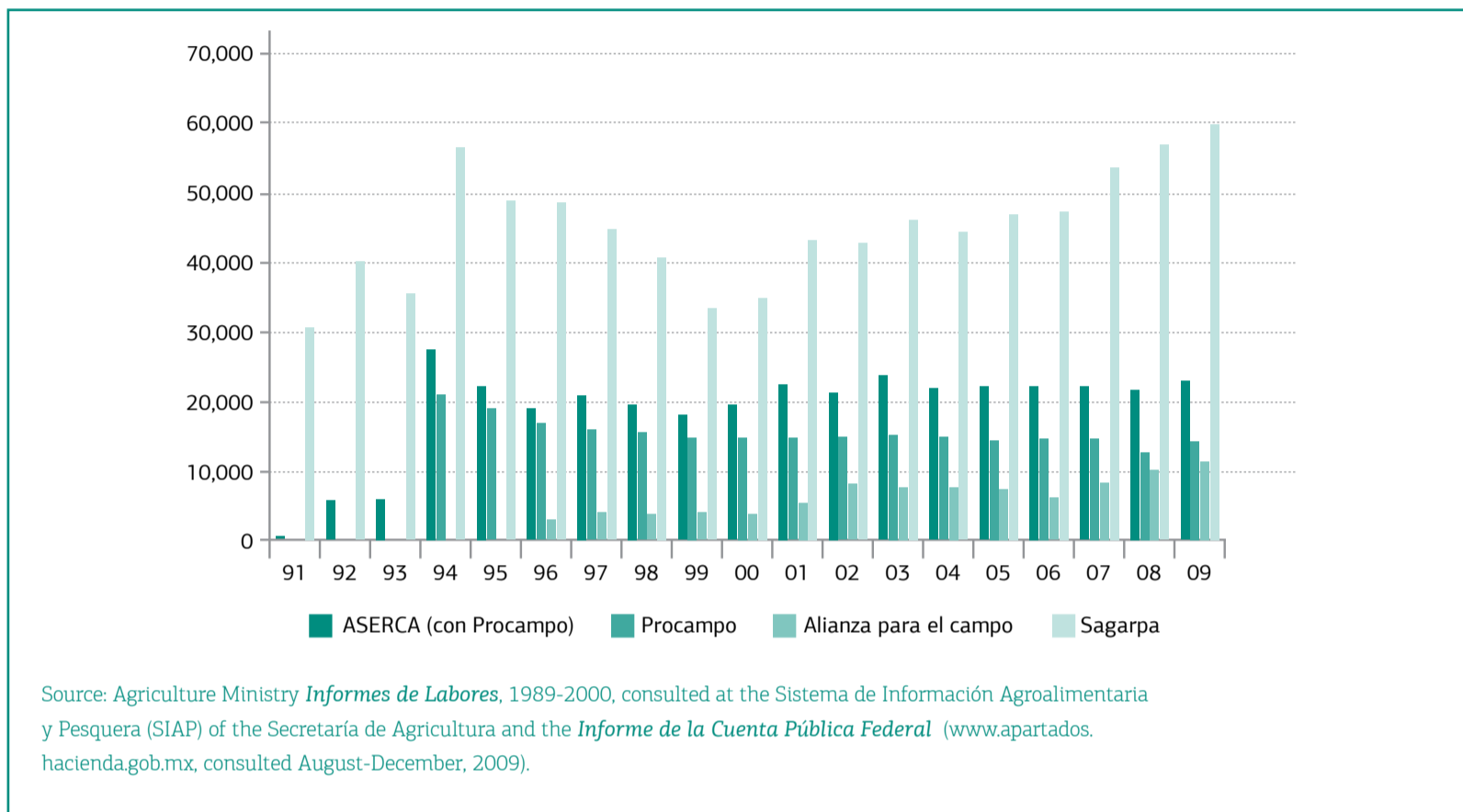
⁸ For an analysis of lessons from Oportunidades for Procampo, see Winters and Davis (2009). Note the striking gender differences between the two programs, with Oportunidades targeting mothers and Procampo reaching primarily male landholders.

⁹ If one considers higher poverty lines, then the composition of the population considered to be in poverty becomes considerably more urban (Coneval 2009, Boltvinik and Damian 2003). Consider, however, that the urban-rural comparisons are based on official poverty lines that are considerably higher for urban than for rural areas, which may understate rural poverty levels.

¹⁰ See Coneval (2009). Note that this official assessment is limited to income, and does not take into account Oportunidades' intended longer-term impacts on poverty through health and educational improvements, which in turn depend on access to adequate public services. So far, Oportunidades evaluations indicate significant health improvements and increased schooling, but limited educational impact (Adato and Hoddinott, forthcoming).

Though Mexico's agricultural spending has had its ebbs and flows over the years (see Graph 1, below), the government has spent vast sums on subsidy payments to farmers -- including at least US\$20 billion in direct payments to farmers since 1994, as noted above. But where did they go? The World Bank's recent review of Mexican agricultural spending concludes that more than half goes to the richest 10% of producers (2009b: x, 62, see also Scott, this volume). Indeed, the World Bank even found that farm subsidies have been tilted upwards so sharply that they actually make rural inequality worse (2009b: 62).

Graph 1
ANNUAL AGRICULTURE MINISTRY SPENDING 1991-2009
(REPORTED PROGRAMMATIC BUDGET, IN MILLIONS OF 2008 PESOS)



The restructuring of state intervention in agriculture had begun well before NAFTA. The 1982 debt crisis was followed by a wave of deregulation and privatization, including the dismantling of the Mexican government's grain trading agency, Conasupo. This state enterprise had long played an important political role in managing potential conflict between different interests, intervening throughout the production-consumption chain for staple foods.¹¹ From the production side, the agency both offered an official purchase price for basic grains and was the intermediary between domestic and international markets, ostensibly offering protection from the vagaries of international market swings, subsidized competition and the potential risk that exporting countries might use food as a weapon in international relations. Yet the benefits from support prices went primarily to those with enough farmland to produce marketable surpluses, while a majority of Mexico's landholders are actually subsistence or subsistence producers – as has long been the case.¹² Indeed, few recognized at the time that even many market-oriented smallholders lacked access to the support prices, in practice.¹³ Moreover, support prices also treated unequally endowed producers equally, by offering them the same price per ton, regardless of widely varying production and marketing costs. This meant higher profits per ton for producers with better access to transportation, credit and marketing facilities.¹⁴ Nevertheless, in spite of these constraints on support prices' social impact, they had become a high-profile symbol of the government's commitment to the peasant economy.

In 1989, the government withdrew from offering support prices and opened up international trade in most grains and oilseeds, with encouragement from the World Bank and well before NAFTA.¹⁵ Corn and beans were the exception. They were sufficiently sensitive for the govern-

11 On the role of Conasupo, see Appendini (1992), Barkin and Suárez (1982), Mitchell (2001), Ochoa (2000) and Yúnez-Naude (2003), among others. On the history of food policy in Mexico, see also Austin and Esteva (1987), Fox (1992) and Hewitt de Alcántara (1994).

12 For typologies of producers derived from agricultural census data, see Paré (1977) and CEPAL (1982). The more recent farm censuses have not been subjected to comparably comprehensive analysis. For the most recent data, see Robles Berlanga (this volume) and Scott (this volume).

13 One of the few large-scale surveys that addressed the question of producer access to official support prices was carried out by the Central Bank's Agricultural Investment Fund, FIRA. Among FIRA borrowers – already relatively privileged farmers, by definition – only 46% reported that they received the government's ostensibly "guaranteed" producer price or its equivalent for their corn and bean crops (Patron Guerra and Fuentes Navarro 1982, cited in Fox 1992: 118).

14 The support price's inherent bias in favor of larger producers was slightly offset by a complementary program that subsidized smallholders' cost of bringing their crops to government purchasing centers, known as PACE (Fox 1992).

15 The World Bank role included a \$300 million agricultural structural adjustment loan in 1988, followed by a \$400 million

ment to continue to offer support prices -- though purchasing policy for corn then favored large irrigated growers in northern Mexico (De Ita 2003). Yet the government's abrupt withdrawal from regulating most grain and oilseed markets left a large gap that the private sector was not ready to fill. Influential producers found themselves unable to find buyers for their crops. Under this pressure, the government stepped in again to provide "order" to national grain markets. The Marketing Support and Services Agency (ASERCA in Spanish) was created in 1991, first to help commercial producers who had difficulty marketing their crops, and then to distribute compensatory payments to grain producers in general, including the low-income subsistence producers who had not been reached by the previous support price policy.

ASERCA was tasked with addressing two very different target populations: a relatively small number of geographically concentrated middle and larger producers whose grain feeds Mexico's urban population, and a much larger number of highly dispersed peasant producers. ASERCA pursued two main parallel policies to deal with these two groups. The most well-known program is the Program of Direct Payments to the Countryside. Procampo, as it is known in Spanish, offered a direct transfer payment that was officially open to all producers who had been growing grain during the period immediately preceding the 1993-1994 registration process. Procampo payments are allocated on a per hectare basis. In 2001, the per-hectare payments were made slightly higher for producers with less than 5 hectares.

A long-term overview of federal agricultural spending on grain, including both Conasupo's last several years of federal budget and ASERCA, shows that while the form of state intervention changed, the overall amount spent annually since 2000 was comparable to 1988 levels (see Graph 3, below). ASERCA replaced Conasupo as the Mexican state's principal grain policy instrument. In the context of the dismantling of Conasupo, Procampo's initial official rationale involved an equity argument, insofar as it promised to reach the most low-income producers to a much larger degree than the crop support price: "A fundamental aspect of the program is the inclusion of more than 2 million subsistence producers who were at the margin of previous support systems" (SARH 1993: 5). Procampo's many other goals included: increasing competitiveness, increasing rural incomes, modernizing marketing systems, encouraging shifts to higher value crops, encouraging economic certainty, delivering subsidies to smallholders previously excluded by the previous crop support price system, and promoting conservation of soil, water and forests. Yet Procampo's combination of multiple goals made it difficult to achieve any of them consistently, as detailed in Merino's study in this report.¹⁶ These multiple goals reflected a political compromise at the program's founding, as discussed below.

At the same time, both larger and smaller-scale producers were also being affected by a wide range of other major changes in the pattern of state intervention in the grain economy, including a sharp reduction in the provision of subsidized farm credit and other inputs, as well as the 1992 constitutional reform that encouraged the individual titling and the possible sale of agrarian reform lands (which accounted for half of Mexico's farmland).¹⁷ Since both this major agrarian policy change and the registration of producers for Procampo were carried out at the same time, those smallholders who feared that the new individual land titling campaign threatened their holdings were also wary of registering their lands for Procampo. This skepticism contributed to a long-term problem of under-coverage of smallholder access to the Procampo program. Indeed, farm subsidy policy was designed to encourage *ejidatarios* to title their lands, and Procampo officials gradually increased their insistence that enrolled producers present their individual land titles as a condition for continuing to receive Procampo payments.¹⁸

During Procampo's design phase, policymakers overcame efforts by agribusiness interests to base payments on the past volume of production, and instead based them on land in cultivation - both for equity reasons and in order to present the program as "decoupled" from production decisions.¹⁹ This decision promised to benefit smallholders, though at the same time, the program design would still benefit larger growers much more than smaller farmers, simply because those with more land would receive higher overall payments. According to Gustavo Gordillo, under-secretary of agriculture when Procampo was designed:

"The original proposal for decoupled subsidies for Mexico included a cap of 20 hectares, thinking that in this range the support would reach approximately 90% of corn producers... This proposal

loan in 1991. Soon thereafter, in 1994, the World Bank provided an additional \$85 million loan to invest in small-scale, rainfed grain producers, who faced the possibility of "extensive unemployment and sharply falling wages," according to the official loan document (World Bank 1994: 6). Soon afterwards, however, the Agriculture Ministry decided instead to fold the project into its conventional investment program, which focused on better-off producers (Fox 2007a: 156).

16 On the tensions between multiple goals, see also CEDRSSA (2007) and Shwentesi Rindermann (et al 2007). For example, Sadoulet, De Janvry and Davis argue that if Procampo were primarily intended to compensate for trade liberalization, then it should have made payments to producers based on amounts of previous sales, whereas if it were primarily an anti-poverty program, it should have been targeted to the poor (2001: 1054).

17 On the 1990s changes in land reform policy, see, among others, Cornelius and Myhre (1998), Fox (1994), Randall (1996) and De Janvry, Sadoulet and Gordillo (1997).

18 As Maldonado's study finds, at least in the Sierra Norte de Puebla, this administrative tightening led to a steady elimination of indigenous smallholders from the program (this volume).

19 On early policy debates over per volume vs. per land payments, see López Presa (2002) and Merino (this volume).

was strongly rejected in 1989-90 by all those who were benefiting most from the support prices... The program's lack of a cap on the size of landholdings that could be covered, or any conditionalities in terms of sustainable development, was enough to maintain the inequality in access to public resources that the support price system had produced." (Gordillo 2009).

Procampo's extra double payment for irrigated producers reflected a similar change from the original policy proposal.²⁰ By the time the actual program made its way through the policy process, Procampo lacked an effective cap on the amount of funds that an individual could receive. Its initial operating rules, published in 1996, stated that payments had to be limited to 100 hectares of irrigated land, or up to 200 hectares of rainfed land (referring also to constitutional limits on landholdings following the agrarian reform), leaving open the possibility of payments exceeding these limits in the case of land rental (Sagarpa 1996). After autonomous peasant organizations gained some representation in Congress, the 2002 Budget Decree reiterated the original payment caps. In practice, however, these payment ceilings were rarely enforced. In 2009, a new policy debate began to consider the possibility of actually beginning to cap Procampo payments, and new rules of operation established that payments were to now be limited to M\$100,000 per farmer per harvest cycle (therefore twice as high annually for irrigated producers, or approximately US\$16,600). In spite of this history of ineffectual caps, if the program had managed to actually reach all eligible smallholders, and if the amounts of per hectare payments were large enough, Procampo still promised to be more equitable than the previous support price strategy. The degree to which Procampo was able to meet these goals turned out to depend on its institutional design and capacity, as well as a clear political bias in the initial registration process, as will be seen below. [Editor's note: by August, 2010, a review of the spring-summer payment lists indicated that the Procampo payments caps were being respected, though the public data does not reveal how much some producers may have been receiving from other programs].

3. PROCAMPO POLITICS: COMPROMISES AND CONSTITUENCIES

Procampo met its *political* goals. Its broad coverage of Mexico's diverse array of grain producers gave the program a large constituency. As former policymaker Gordillo recalled, "what was needed was a flexible instrument to adapt to the diversity of rural producers" (2009). Insofar as the program was designed in 1993 to buffer the expected social and political costs of NAFTA, it is remarkable that Mexican farmers did not launch a large-scale national protest against the trade opening until early 2003. Peasant organizations linked to the ruling party, notably the National Peasant Confederation (CNC), became stakeholders in the government's combined trade opening/compensation payment strategy because they were able to influence the decisions regarding which producers were included in the Procampo at its founding, as Merino's study shows (this volume). In other words, in 1993-1994 the government was able to use clientelist distribution of farm payments to offset potential opposition to the restructuring of agricultural policy.

Many years later, Procampo retains substantial support from producer organizations and policymakers, outlasting its original mandate to cover the 15 year period of NAFTA implementation. In 2007, Mexico's president announced that Procampo would continue for 5 years (through 2012), essentially postponing the policy debate over the program's future until the next administration. The governors' association also strongly backed the status quo in farm subsidy policy (CONAGO 2008). Both associations of large growers and some of the largest political party-affiliated organizations of small producers, like the CNC, closed ranks against changes in subsidy policy and in favor of increasing the resources under governors' discretionary control (Pérez 2009a, 2009b). In contrast, the autonomous, non-partisan wing of the peasant movement called for farm subsidy policy reforms that would favor lower-income producers, including full coverage of smallholders, more of a sliding scale of payments to favor smallholders, and incentives for environmentally sustainable agricultural practices (CONOC 2009a, 2009b).

Procampo has also long received significant support from multilateral funders, whose loans combine economic support with political backing.²¹ The Inter-American Development Bank weighed in first, loaning US\$500 million for Procampo in 2001 (IDB 2006). In 2009, the IDB renewed its support with the first US\$750 million tranche of a US\$2.5 billion credit line, and the World Bank joined in with preparations for a US\$449 million loan planned for 2010. These recent loans were accompanied by a series of studies and recommendations that confiden-

²⁰ Personal email communication, Gustavo Gordillo, Feb 21, 2010

²¹ Indeed, the World Bank's official rationale for its proposed 2010 loan to support Procampo makes explicit reference to the program's long-term political logic: "the Procampo program was very successful in meeting its primary objective, which was to give the Mexican government a politically sustainable way to accede to the NAFTA and undertake a far-reaching reform of agricultural support policy" (World Bank 2009b: 5).

tially proposed to the government a much more pro-poor orientation to agricultural spending (e.g., Taylor, Yúnez-Naude y González 2007).²² Indeed, the IDB loan is explicitly limited to covering only Procampo payments up to ten hectares per producer, “recognizing that the program is intended to improve the conditions of low income producers” (IDB 2009: 7). Mexican agricultural policymakers accepted the loan, but not the implicit recommendation of a policy change in favor of a payment cap. The World Bank has taken a similarly subtle approach, proposing to support Procampo while noting equity concerns – though expressed differently. According to the public summary of the World Bank’s proposed new loan for Procampo, there is “room for improvement” in Procampo’s equity impacts, and the loan proposal recommends that the program’s rules of operation “ensure indigenous peoples benefit to the maximum extent feasible from the proposed project” (World Bank 2009b: 7).²³ [Editor’s note: This World Bank planned loan was cancelled in August, 2010].

While Procampo’s original design reflected a compromise between technical and interest group logics, its launch in practice was also marked by electoral politicization. The initial registration of producers was carried out during the 1993-1994 presidential campaign, punctuated by the Jan. 1, 1994 Zapatista rebellion. As Merino’s study in this volume documents, beginning in 1993, Procampo’s founding director, José Octavio López Presa, experienced strong pressures from both peasant organizations linked to the ruling party and Sinaloa agribusiness to “negotiate” which producers would get to end up on the beneficiary rosters. The director reported that he attempted to redirect the negotiations away from Mexico City, to the local district level, while also holding elections for 45,000 local producer representatives, from 85,000 villages, who would participate in the design of the program lists and provide community-based oversight. Conflict over control over the subsidy registration process proved costly. López Presa recalled that at least 11 of those elected local leaders were killed during this period. As the 1994 presidential election campaign heated up, pressures to politicize access to the program increased. In response, in the final weeks of the campaign, López Presa officially reminded all of the program’s field staff of their obligations as public servants, noting that any attempt at political manipulation of the program should be reported immediately. In response, the Secretary of Agriculture had him fired within 24 hours (see Merino, this volume).

Clearly, senior federal officials collaborated with ruling party producer organizations at Procampo’s founding to influence which producers had access to the program. Moreover, this massive extension of politicized access to farm subsidies took place just before a presidential election in which the secret ballot was not guaranteed, especially for rural citizens (Fox 2007a: 112-137). Since access to the program was strictly closed to new participants soon after its founding, this politicization at Procampo’s origins may have biased the substantial under-coverage of the eligible smallholder population documented below.

Subsequent elections involved less overt politicization of access, but electoral use of Procampo persisted nevertheless. In the 2000 elections, the most reliable national survey found that Procampo recipients were more exposed to vote-buying efforts than non-recipients (Aparicio and Corrochano 2005: 385). In the run-up to the 2006 presidential elections, voter surveys carried out by the Civic Alliance, the non-partisan public interest group, in regions considered vulnerable to electoral abuses found that 7.8% of those surveyed reported that access to Procampo payments was subject to political conditions (“coacción”) – less than state government social programs but more than Oportunidades (Almada Mireles 2007, cited in Fox and Haight 2009: 82). This citizen perception of conditioned access was encouraged by Procampo’s procedural requirement that registered producers must still verify their eligibility for their payment every year with government authorities. Remarkably, however, a large-scale United Nations-sponsored public opinion survey at the time of the 2006 elections found that 69.5% of Procampo recipients saw the payment as a right rather than as a favor, while only 1.8% reported having been pressured to vote for a specific party (PNUD 2007: 179, 189).²⁴

22 The public interest group Fundar submitted an information request to the Treasury Ministry for this study. Treasury declared the document confidential and Fundar filed a complaint (“recurso”) to the IFAI. The IFAI commissioners ruled in favor of the requester and directed the Treasury Ministry to release the document, which was sent in hard copy. See resolution 0000600045109 @ www.ifai.org.mx (zoom).

23 Because Procampo was not designed with any special provisions to target or assist indigenous farmers, the World Bank’s public summary of its draft loan proposal goes on to specify that it will be designed to include a social assessment which “will have the following objectives: (i) to assess the extent to which the project can benefit indigenous population; (ii) to identify barriers that may be preventing indigenous peoples to receive benefits; and (iii) to propose an action plan to address identified barriers and propose alternatives to ensure their participation. A social assessment will be prepared using as much as possible recent studies and focusing on the states where the majority of the indigenous population live; consultation will be conducted at national level with participation of indigenous peoples’ leaders and other key stakeholders.” (World Bank 2009a: 7). This proposal follows the World Bank’s indigenous peoples policy mandating informed participation, which has rarely been applied to its Mexico projects (Fox 2003, 2007a). As of July, 2010, it was not clear whether the Mexican government would accept the World Bank’s proposed social assessment.

24 Even this small percentage still reflects an absolute number of voters that is not far from the margin of difference between the two leading presidential candidates in the 2006 elections (depending on the actual number of Procampo recipients and the survey’s margin of error). More generally, conservative estimates of the share of the 2006 electorate subject to violations of the freedom to vote through manipulation of social programs, known as “coacción,” confirmed that the size of the vulnerable population was larger than the margin of difference in the election (Fox and Haight 2009).

4. PROCAMPO'S COVERAGE: BOTH REACHING AND MISSING THE POOR

Procampo is the most progressive of Mexico's national grain support programs, reaching more low-income farmers than any other. The program reached at least 1.6 million low income producers in 2005, those with less than 5 hectares (GEA 2006: 84), of a total of approximately 2.5 million annual payments (depending on the year and the source). As Table 1 shows, according to an analysis of 2001 Procampo data, 61.5% of participants had less than 2 hectares, and 86% of participants had less than 5 hectares (Rascón, Hernández and Salazar 2006: 122). Of the total amount of land covered by Procampo, 21.6% belonged to producers with less than 2 hectares and 47.5% was in holdings of less than 5 hectares. In addition, according to the most comprehensive official evaluation, a slight majority of participating producers interviewed did not produce harvests large enough to sell a surplus on the market (GEA 2006: 97). Procampo clearly reaches subsistence and sub-subsistence producers to a significant degree.

Table 1

DISTRIBUTION OF PROCAMPO PARTICIPANTS BY SIZE OF LANDHOLDINGS (2001)

Size of landholding	Number of registered plots by size of landholding	% of total registered plots	Total number of hectares registered	% of total hectares covered by Procampo	Average size of landholding
Less than 1 ha	714,366	17.43	379,594	2.78	0.53
1+ to 2 ha	1,805,191	44.04	2,561,416	18.79	1.42
2+ to 3 ha	499,047	12.17	1,391,436	10.21	2.79
3+ to 5 ha	510,889	12.46	2,142,026	15.71	4.19
5+ to 10 ha	395,771	9.65	3,006,214	22.05	7.60
10+ to 20 ha	122,545	2.99	1,850,997	13.58	15.10
20+ to 30 ha	23,550	0.57	599,254	4.40	25.45
30+ to 40 ha	9,767	0.24	354,964	2.60	36.34
40+ to 50 ha	7,046	0.17	331,971	2.44	47.11
More than 50 ha	11,069	0.27	1,015,061	7.45	91.70
TOTAL	4,099,241	100.0	13,632,933	100.0	3.33

Source: Rascón, Hernández and Salazar (2006: 122) using official Procampo data for 2001.

This data does not speak to the issue of how *comprehensive* the program's coverage is, however. Both government policy evaluations and independent analysts tend to assume that the Procampo program actually reaches the vast majority of Mexico's grain producers, since they were presumably eligible to sign up when the program began. Yet the program's official evaluations do not attempt to measure the degree to which Procampo reaches its target population: grain producers. Procampo continues to exclude a majority of Mexico's lowest-income farmers, those with less than 2 hectares of land – for reasons that are not clear. Scott's analysis of Oportunidades' 2004 household survey data finds that in low-income rural localities, Procampo only reaches 7% of those with less than 1 hectare, 19% of those with 1-2 hectares, and 39% of those with 2-5 hectares (see Table 2). These survey results also show that the Oportunidades program reaches a much larger – though still very incomplete – share of low-income, often indigenous farmers. To contextualize this finding, Table 3 shows the results of a different survey, based on a representative national sample of grain producers in general, which found that only 49.9% of them received Procampo payments in 2007. Independently, these two surveys show that Procampo excludes the poorest of the poor. This pattern is rendered invisible by the official program data.²⁵ This is a significant example of how the lack of official transparency in program implementation undermines informed public discussion of how to improve Procampo's social impact.

²⁵ The 2007 agricultural census apparently did not address this issue, at least not in the results that had been publicly released as of the end of the 2009. For analysis of findings and some of the limitations of the census, see Robles Berlanga (this volume).

Table 2

PRODUCER ACCESS TO PROCAMPO IN RURAL LOCALITIES COVERED BY OPORTUNIDADES, BY SIZE OF LANDHOLDING (%)

	<1 HA	1-2 HA	2-5 HA	6-10 HA	11-20 HA	20+ HA
Households that receive Procampo payments	7	19	39	47	44	42
Households that receive Oportunidades payments	46	58	56	51	35	38
Households reported as indigenous	31	33	17	6	6	8

Source: Scott, this volume (Table 5), based on ENCASEH, 2004 (a household survey of localities covered by Oportunidades, n = 784,794). Of the households surveyed, 25% were landholders, and 28% of them were in Procampo.

Procampo's rules do include some measures that tilt benefits slightly to low-income producers. In 2001, Procampo revised its payments for producers with less than a single hectare, rounding them up to the equivalent of one full hectare. In 2003, Procampo also began to pay a modest per-hectare bonus for producers with less than 5 hectares. By 2006, 60% of the land covered by Procampo was reportedly in plots of under 5 hectares, and therefore received this "preferential rate." (GEA 2006:79).²⁶ Procampo also created a capitalization option, which created an alternative to interest-bearing credit by allowing smallholders – primarily those with less than five hectares – to receive five years of payments in advance, based on a government-approved proposal for a productive project. Following the 2009 modifications to the rules of operation, in addition to capping payments at M\$100,000 per harvest cycle, smaller rainfed farmers with less than 5 hectares now receive M\$1,300 (around US\$100) per hectare – an amount that recovered the original 1994 value of Procampo payments for the first time since the program's launch. Overall, Procampo payments accounted for 32% of the income of those low income producers who had access to the program.²⁷

Table 3

PROCAMPO COVERAGE OF GRAIN FARMERS, 2007

Farmers who received Procampo in 2007 (all crops)	44.8%
Grain farmers who received Procampo in 2007 *	49.9%
Lowest income tercile 2007	43.2%
Middle income tercile 2007	49.0%
Highest income tercile 2007	57.6%
Grain farmers in 2007 who reported receiving Procampo in 2002	52.7%
* Maize, wheat, barley, rye, or sorghum	

Source: Encuesta Nacional a Hogares Rurales de Mexico, or ENHRUM, 2008. N = 1,782 households in 14 Mexican states. The ENHRUM sample was designed by INEGI to be representative of localities with between 500 and 2,500 inhabitants, representing 80% of the population officially considered to be rural. Thanks very much to Prof. Ed Taylor of the University of California, Davis for sharing the data and to Justin Kagen for the data analysis

The most comprehensive official evaluation recognized that "Procampo was not designed to be, nor can it be, an instrument for redistributing resources in the agricultural sector" (GEA 2006: 76). However, this claim is based on the evaluators' implicit assumption that the program's parameters are fixed. Indeed, the evaluation does not address the issue of payment caps for large growers. Simple changes in the program's rules of operation could in fact permit the program to be significantly redistributive, if payments were limited to once per year (eliminating privileges for irrigated producers), if producers with less than five hectares received a substantially larger per-hectare payment (a sliding scale principle already established), and if payments were capped at a certain smaller number of hectares (as implied by the IDB's recent \$2.5 billion credit line for Procampo). As of mid-2010, however, policymakers had still ruled out a more redistributive approach to Procampo because of what the World Bank's recent agricultural budget review calls "a crucial political-economy issue... the pressure of rent-seekers and interest groups to influence programs and their design" (2009b: 77). Merino's study refers to this same dynamic as the "capture and diversion of public resources" (this volume).

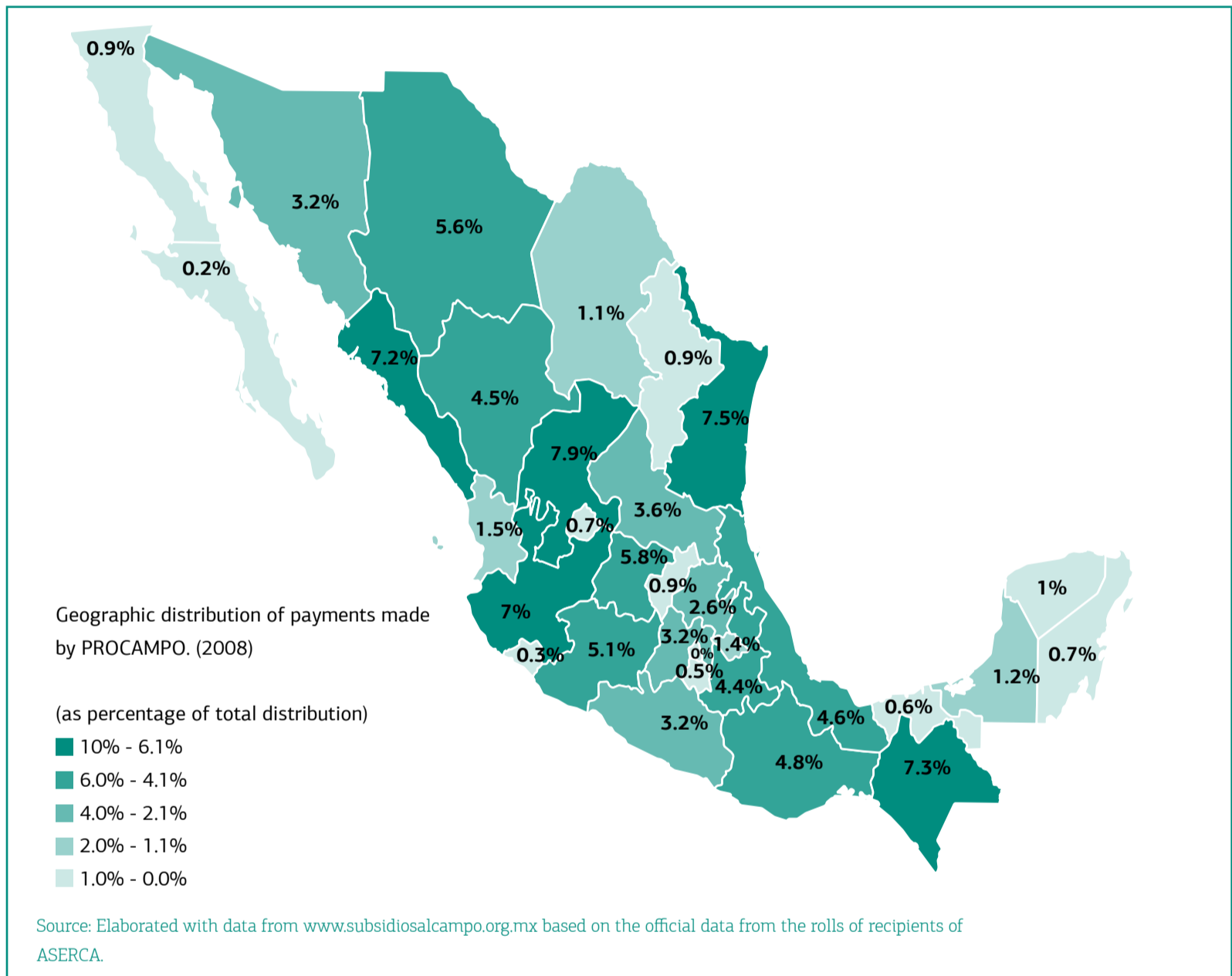
²⁶ Note that this finding is significantly higher than Rascón, Hernández and Salazar's findings (2006), an issue that may be related to systematic problems with double-counting of producers in the Procampo roster, as detailed in Haight and Fox (this volume).

²⁷ See GEA 2006: 202. This report also has a detailed history of changes in rules of operation.

Nevertheless, Procampo is still the most progressive of Mexico's large-scale farm subsidy programs, insofar as it reaches low income producers to the greatest degree (see Scott, this volume). Compared to Mexico's other agricultural programs, Procampo's geographic coverage is also less biased toward northern states. Robles Berlanga's data analysis in Box 1 shows that most production-oriented agricultural spending does not reach low-income municipalities. In Box 2 he shows what this bias means for "indigenous municipalities." Map 3 shows the geographic distribution of all Procampo program payments in 2008. Map 4 shows the geographic distribution of the "Traditional Procampo" program in 2008, while Map 5 shows the geographic distribution of the above-mentioned Procampo Capitalization program, whose greater southern focus is consistent with its established objective of targeting smaller farmers.

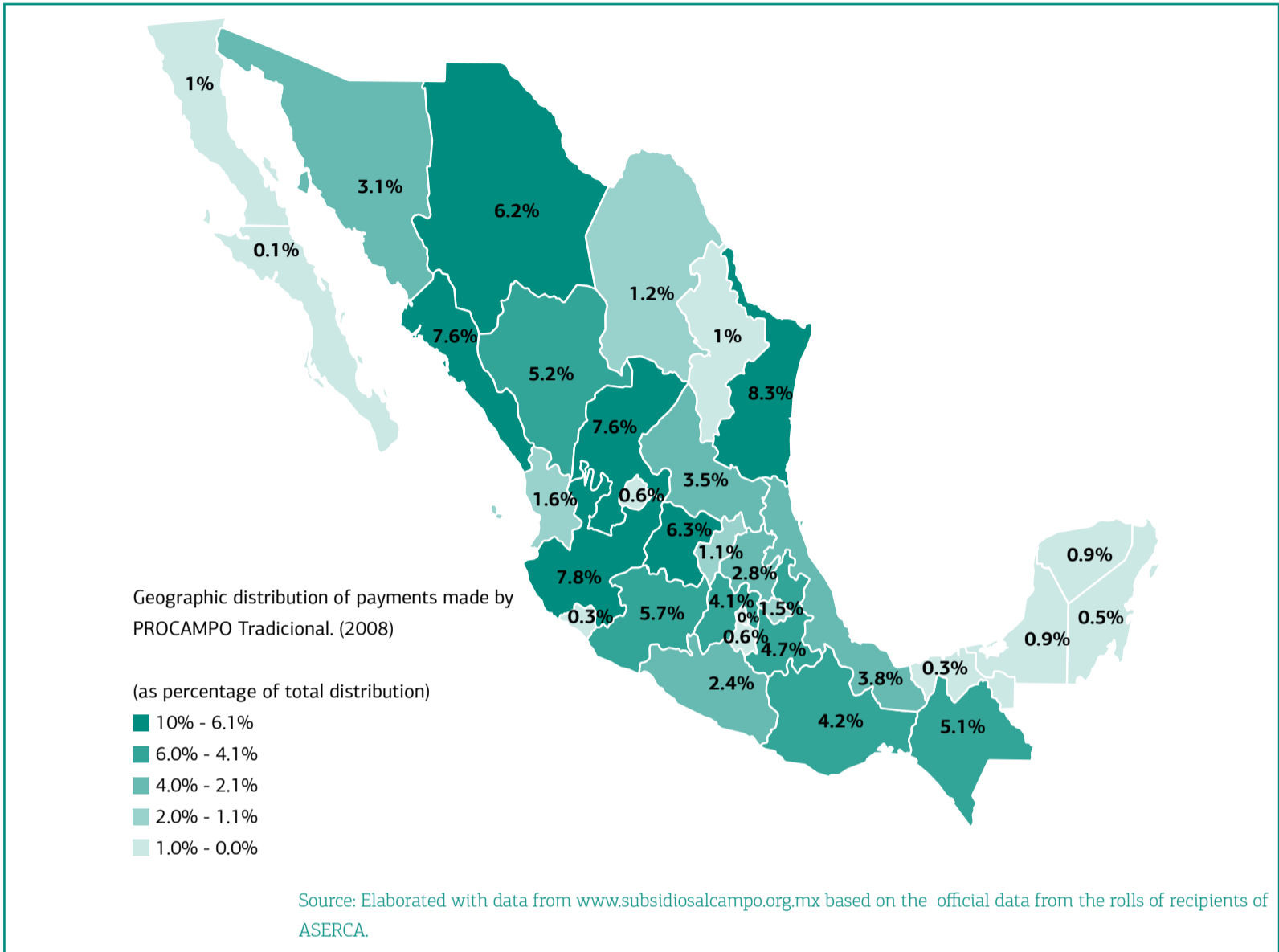
Map 3

GEOGRAPHIC DISTRIBUTION OF ALL PROCAMPO PROGRAM PAYMENTS
(PERCENTAGE BY STATE, 2008)



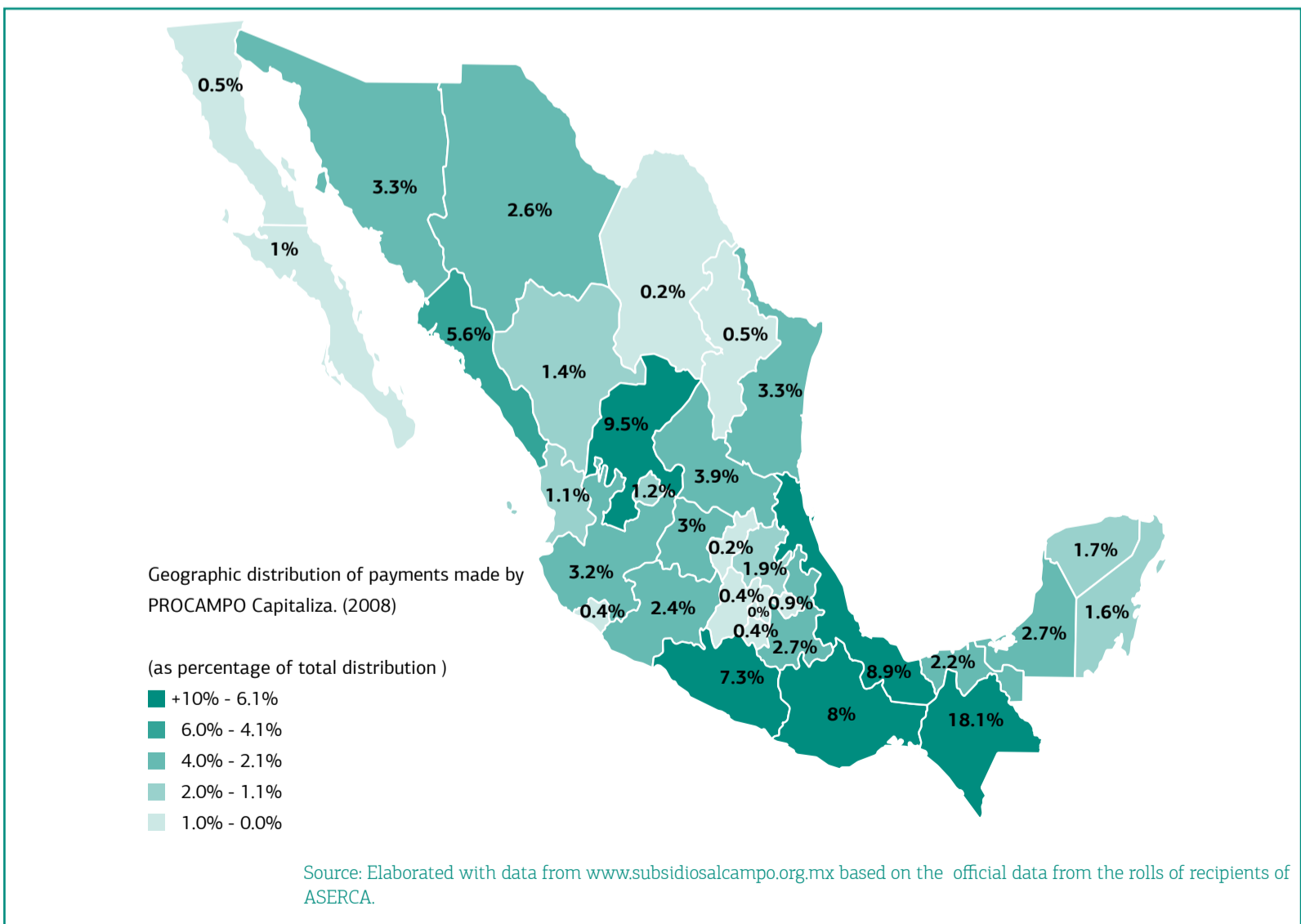
Map 4

GEOGRAPHIC DISTRIBUTION OF "TRADITIONAL PROCAMPO" PROGRAM PAYMENTS, 2008
(PERCENTAGE BY STATE)



Map 5

GEOGRAPHIC DISTRIBUTION OF "PROCAMPO CAPITALIZES" PROGRAM PAYMENTS, 2008
(PERCENTAGE BY STATE)



BOX 1: WHICH AGRICULTURAL PROGRAMS REACH LOW-INCOME COMMUNITIES?²⁸

Héctor Robles Berlanga (UAM - Xochimilco)

Only some of Mexico's many rural development programs target low-income municipalities. The Mexican congress' rural development research center has developed an extensive database that offers a geographic and gender breakdown of the distribution of the 2007 rural budget, which includes social, infrastructural, financial, labor-related and environmental spending as well as economic investments (denominated "competitiveness"), though it does not include health and education. This effort was inspired both by the Sustainable Rural Development Law's effort to encourage coordination across programs and by the 61.5% growth in overall rural spending between 2000 and 2009.

This data clearly shows that Mexico's poorest municipalities receive only a modest share of public funds for agriculture – only 6.9% of 2007 spending was allocated to those with "very high" marginality levels, with another 30.6% going to those considered of "high" marginality, though together they accounted for 57.5% of the production units receiving support. In spite of Sagarpa's long list of programs, only Procampo, Progan (transfer payments for livestock owners) and Coffee Support have a significant presence in low-income municipalities. Moreover, the per capita amounts spent by these programs tend to be too small to permit the capitalization of production units. The agricultural programs that are considered to promote "competitiveness" tend to be limited to already-capitalized producers in northern Mexico.

When one takes into account the official definitions of their "target populations," agriculture programs also vary widely in terms of their degree of coverage of potentially eligible producers. Procampo has the highest degree of coverage, with a total of 67.1%, including 10.7% enrolled in the "Procampo Capitalizes" program, which allows advance payment of 5 years of cash transfers to support an investment project. The agricultural program with the next-highest degree of coverage of its potentially eligible population is the Coffee Support Program, at 60.4%, followed by the Progan livestock program with only 6.6% coverage. ASERCA's various marketing support programs, including Ingreso Objetivo, all reach well under 1% of producers.

²⁸ This box summarizes the detailed findings presented in Robles Berlanga (2010a)

BOX 2

AGRICULTURAL SPENDING IN INDIGENOUS MUNICIPALITIES²⁹

Héctor Robles Berlanga (UAM- Xochimilco)

Approximately one in four of rural Mexicans are indigenous citizens who live in what are considered “indigenous municipalities.” These rural municipalities are defined as those where more than 40% of the population lives in households in which one of Mexico’s 62 officially recognized indigenous languages are spoken. Six million indigenous people lives in these municipalities, accounting for approximately 60% of Mexico’s total indigenous population, according to the national statistics agency (INEGI). Indigenous agrarian reform communities control 21.9% of the land in the reform sector, and indigenous smallholders account for one quarter of the total number of Mexico’s farms.

To what degree do Mexico’s agricultural subsidies reach indigenous farmers? The Mexican congress’ rural development research center’s comprehensive database shows that most of what does reach indigenous municipalities is social welfare and local infrastructure spending, but not spending for agriculture. For example, Oportunidades and the Diconsa village food stores have widespread coverage of indigenous municipalities. Agricultural spending, in contrast, falls short. Even though Procampo was designed to reach the smallest landholders, only 12.4% of agricultural spending was reported as reaching “indigenous municipalities.” Given that the populations of many municipalities in this official category are majority non-indigenous, and those farmers often have more land, this figure is a substantial over-estimate of what actually reaches indigenous farms. The Coffee Support Program is the main exception to this trend. Indigenous municipalities receive an even smaller share of rural development spending designated as environmental, only 6.2% of these federal resources. In turn, indigenous municipalities receive even less of the federal funding for credit for rural development activities - only 0.1% of that budget.

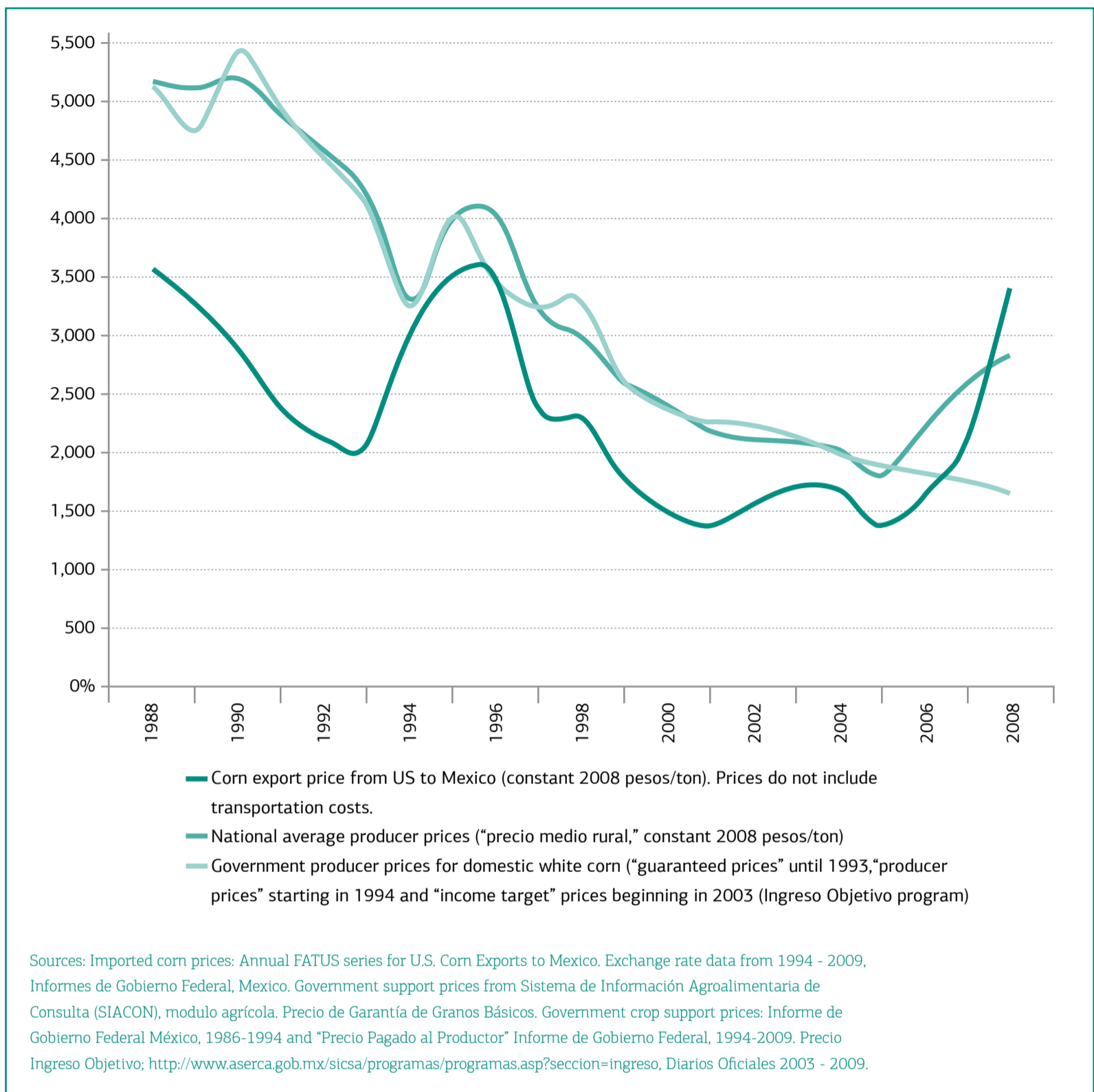
5. THE CONTEXT FOR COMPENSATORY PAYMENTS: CORN PRICE TRENDS

Before further analysis of the compensatory payment programs for corn farmers, it is important to recall the rationale for this official policy: the predicted drop in the price of corn. Graph 2 sums up three major price trends for corn, beginning several years before the trade opening, in 1988. The graph shows constant corn prices in terms of 2008 pesos. One line shows the price of imported corn, converted into pesos; prices fall before NAFTA, rise again in 1995 because of the late 1994 devaluation, then the downward trend continues until the 2007 spike in international prices. The trend for the “average rural corn price,” an official indicator that reflects a national average of the diverse prices producers receive in the private market, shows that first, until the devaluation, trade protection kept the producer price well above the price of imported corn. At the same time, however, the two prices moved in tandem. After the devaluation, the fall in the international price pulled domestic producer prices down, a trend that continued until the international price spike in 2007.

The next line suggests the influence of state intervention in national corn markets, since the official support price tracks the domestic producer price very closely, apparently as the result of its regulatory effect on the private market. Subsequently, after the elimination of Conasupo and the support price, the state continued to intervene in the national corn market through the Ingreso Objetivo (Income Target) crop subsidies. While the state no longer purchases crops directly, this program’s impact in the market is similar to that of a support price – though only for some commercial producers. For this reason, Graph 2 presents the support price, followed by the Ingreso Objetivo price, in a single line.

²⁹ This box summarizes findings in Robles Berlanga (2010b)

Graph 2
INTERNATIONAL PRICES, PRODUCER PRICES, AND GOVERNMENT PRICES FOR CORN,
1988 TO 2008



6. THE RE-INTERVENTION OF THE STATE: FARM SUBSIDIES AS PRODUCTION INCENTIVES

Because Procampo’s per-hectare approach “decoupled” subsidy payments from the volume of production, the program was widely hailed by free-market advocates. In practice, however, it turned out that Procampo payments remained linked to production in two major ways. First, producer access to the payments is directly conditioned on continued use of the land for crop production, hence the government’s ongoing monitoring of land use and the requirement that producers reapply every year. In this sense, the logic of the program was not limited to the idea of compensating those who had been growing grain before NAFTA, but also mandated their *continued* production. The second way in which Procampo payments are still linked to production is through its seasonal payments. Procampo pays irrigated producers for *both* of their annual crop cycles (and therefore double what is received by rainfed producers with the equivalent amount of land). Because the minority of Mexican farmers who have irrigation can grow two harvests, they are at least twice as productive as the majority that depends on rainfall, for the same given amount of land. The double-payment approach therefore undermines the subsidy’s ostensible goal of decoupling payments from production. This policy decision also sharply accentuates the social bias inherent in the program’s uncapped per hectare payment approach.

ASERCA's other major strategy involves a complex package of marketing subsidy programs that turn out to have little to do with free markets.³⁰ Their share of the agricultural budget has increased steadily over the past decade (see Graph 1). Between 1991 and the early part of 2000 this approach was very ad hoc, as its coverage of different crops and states varied widely. The government first made subsidy payments directly to crop *buyers*, notably including large national and transnational agribusiness trading firms (discussed further below). Beginning in the early 2000s, a portion of this program was reoriented to pay the difference between domestic and imported prices directly to larger producers, under the name Ingreso-Objetivo. This subsidy instrument is known as a “deficiency payment” in the US. Each year, ASERCA predicts an international target price, chooses select producers with substantial marketable surpluses, and pays them the difference on a per-ton basis. This payment is, in effect, a support price, which is why Graph 2 depicts the history of state intervention in corn markets in terms of a continuous line that includes both Conasupo's floor price and ASERCA's target price. These commercial farmers' per-ton payments also serve as a bonus on top of their Procampo payments. According to official ASERCA recipient lists, between 2000 and the early part of 2009, only 4 northern states concentrated 72.6% of the total payments from Ingreso Objetivo (Sinaloa, Sonora, Tamaulipas and Chihuahua, in that order).³¹ By protecting a few large growers from having to compete with cheaper imports, the Ingreso-Objetivo program encouraged increased domestic production, as discussed further below.³²

Both Ingreso-Objetivo's quiet expansion of selective post-NAFTA protectionism and Procampo's production inducements are at odds with the widely held view that the Mexican state has withdrawn from the rural economy. While the state clearly both reduced and changed the nature of its intervention after the 1982 debt crisis, it did not withdraw by any definition – on the contrary, the ASERCA experience is an example of a broader trend in which new levers of public policy intervene even more “deeply” in the countryside than before (Fox 1995). For example, under the previous support price policy, Conasupo simply received crops at their network of warehouses. With Procampo, in contrast, the federal government needs to know exactly who grew what and how much land they have in production, down to their first and last names. In the case of marketing support payments, the state also needs to keep track of how much producers sell on the private market, at what price and to whom. In addition, the state also set itself the task of *continuing* to monitor behavior on more than two million Procampo plots, to ensure that producers on the rolls still comply with the requirement to keep planting each year in exchange for the per-hectare crop subsidies. Overall, this approach dramatically increases the challenges posed to state capacity. This study therefore pays special attention to the quality of the official roster of farm subsidy recipients, as an indicator of the state's institutional capacity to meet these new challenges. As documented in Haight and Fox (this volume), the ostensibly transparent official subsidy recipient lists turn out to have major limitations that prevent a clear accounting of total payments to individuals.

Limits to institutional capacity and complications in the official data were revealed in a series of investigative reports in one of Mexico's leading newspapers, *El Universal*. The issue of who gets what from Procampo was first covered in-depth in July, 2009, and again in February, 2010.³³ The coverage focused on who exactly has been receiving Procampo payments, revealing the family names of alleged drug traffickers and public servants working in the agricultural sector that appear in the official rosters. Public debate quickly turned to the legitimacy of these payments. Defensive officials often cited their limited institutional capacity to effectively monitor all of Procampo's recipients as an excuse for why some payments are made to people who might not qualify for the program. SAGARPA promised to place renewed emphasis on reviewing the recipient list, verifying that all recipients do indeed meet qualification requirements, and updating the information in the official recipient lists, though with few tangible results as of mid-2010. The ensuing public debate revealed another major limitation to the official data, which is the inability to know with accuracy exactly how many distinct farmers are receiving payments. The government chooses to organize its subsidy data by registered payment rather than by individual recipient, which allows for both over-counting and under-

30 The focus here is on just one of these marketing support programs, Ingreso Objetivo, both because it is the largest and because the others make much less data public (see Haight and Fox for details on opacity of other subsidy programs). With the exception of the work of CEDRSSA (2004, 2007), Echánove Huacuja (2009) and Steffen Riedemann (2007), ASERCA's marketing subsidies have received remarkably little independent research attention. Economic analysts at the multilateral development banks, however, consider them to contradict Mexico's commitment to market-friendly agricultural policies (World Bank 2009b). The IDB commissioned a detailed study that was extremely critical of the program on both economic and equity grounds (Sumner and Balagtas 2007). The Treasury Ministry denied a public information request for this document, but on appeal the IFAI Commissioners decided in favor of the requestor, the public interest group Fundar. The Treasury Ministry complied with the mandate to release the document. See IFAI Resolution 0000600044909, <http://www.ifai.org.mx/resoluciones/2009/2160.pdf>.

31 This figure is based on analysis of ASERCA official recipient lists for Ingreso Objetivo, 2000-2009 (through September, 2009, downloaded September 30th, 2009 from http://www.ASERCA.gob.mx/artman/publish/article_1424.asp). Data published on Subsidios al Campo en México www.subsidiosalcampo.org.mx, where concentration calculations are available.

32 After 2007 increases in international grain prices, the scope of the Ingreso Objetivo program narrowed, but other discretionary grain production subsidies then grew, notably the contract farming program for sorghum, wheat and yellow corn (Echánove Huacuja (2009)).

33 The July, 2009 series of reports can be seen at http://www.eluniversal.com.mx/graficos/especial/EU_procampo/historico.html, and the February 2010 series is available at http://www.eluniversal.com.mx/graficos/especial/EU_procampo/.

counting the absolute number of actual farmers participating in the program (see further discussion in Haight and Fox, this volume). What is clear is that policymakers' often-cited number of 2.7 to 2.8 million participants in Procampo is a substantial over-estimate. However, despite the previous commitments to review and verify the official data on Procampo recipients, the Minister of Agriculture continued to use this inaccurate figure to describe the program. For example, he cited this figure while defending the fact that he, his family and his businesses have received over M\$ 11 million in farm subsidies since 2005 (Arvizu 2010).

These increased challenges to state capacity have not been accompanied by institutional accountability reforms that would harness the potential of stakeholders and civil society organizations to contribute to public sector performance. The *Universal* investigation also revealed ASERCA's limited institutional commitment to respond to citizen demands that the program respect its own operating rules. One 2010 news report showed that the April, 2009 rules of operation not respected in the Spring-Summer 2009 payment cycle, nor were SAGARPA and ASERCA's commitments to "clean up" the payment rosters fulfilled (Hernández 2010).

While Procampo has attracted the most public attention because of its high profile and broad coverage, Mexico's other major farm support programs also lack functioning institutional channels through which producers or public interest groups can identify problems and promote accountability (Hevia de la Jara, this volume). This includes the Alianza agricultural investment program, operated by the state governments (Palmer-Rubin, this volume). Even in the case of Procampo, which was launched with a large-scale campaign to elect producer representatives known as "vocales," there is little field-based evidence of functioning accountability mechanisms. The official evaluations do not address the issue. The "vocales" are nominally tasked with being an interface between Procampo participants and ASERCA, but in practice, their role ranges from weak to non-existent. Most often, they represent the agency to the producers rather than vice versa (Maldonado, this volume, Hevia, this volume). The main exception to this pattern occurs in some indigenous communities, where the role of the *vocal* has been incorporated into existing community self-governance structures (Maldonado, this volume).

Looking beyond local program operations, there is little evidence that federal agricultural agencies have sought balanced partnerships with Mexico's broad range of non-partisan regional producer organizations that have demonstrated commitment to promoting an effective, accountable public sector. For example, consider the experience of the Tosepan Titataniske cooperative in northern Puebla, detailed in Maldonado's study (this volume).³⁴ For almost three decades, this broad-based regional organization of indigenous smallholders has consistently sought to partner with public sector agencies to improve the effectiveness of anti-poverty programs, and Procampo was no exception. Yet the organization's efforts to cooperate were rebuffed, including its anti-corruption initiatives, and many of its members who had initially managed to register for the Procampo were later dropped from the rolls.

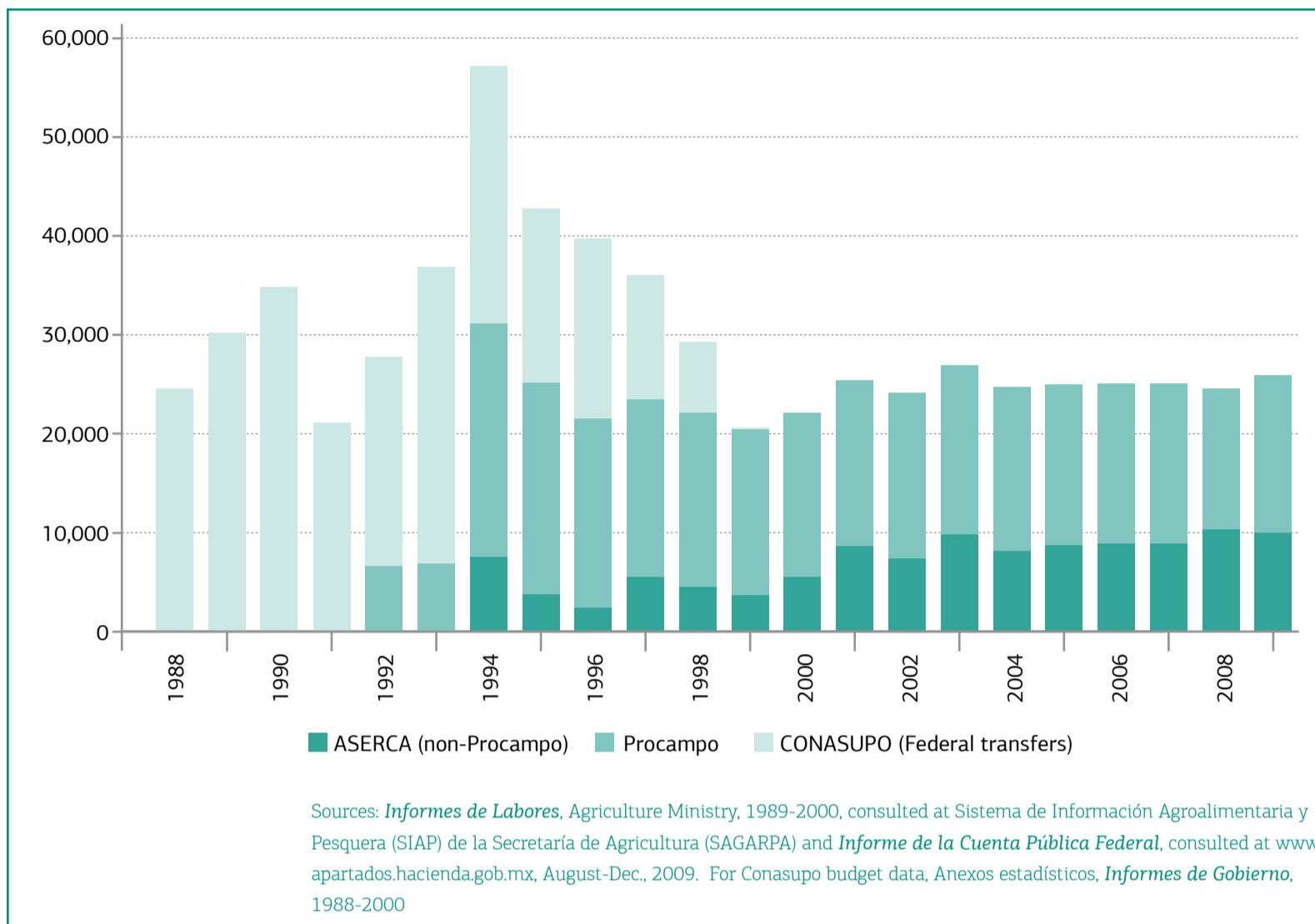
7. POST-NAFTA AGRICULTURAL TRENDS

What have post-NAFTA agricultural policy priorities been in practice, as seen through long term budget trends and production outcomes? After Mexico's agricultural spending fell sharply following the 1982 debt crisis, it grew steeply in 1994, a year that combined presidential elections and NAFTA implementation. Procampo funding was generous at first, with per hectare payments initially valued at approximately US\$100. Agricultural spending then fell sharply after the 1995 peso crisis, including both Procampo's overall budget and the per-hectare real value of the payments (Graphs 1, 3 and 4). As Conasupo was dismantled, ASERCA's budget grew, as ASERCA's marketing support programs and Procampo took its place (Graph 3).

³⁴ See also <http://www.tosepan.com/>

Graph 3

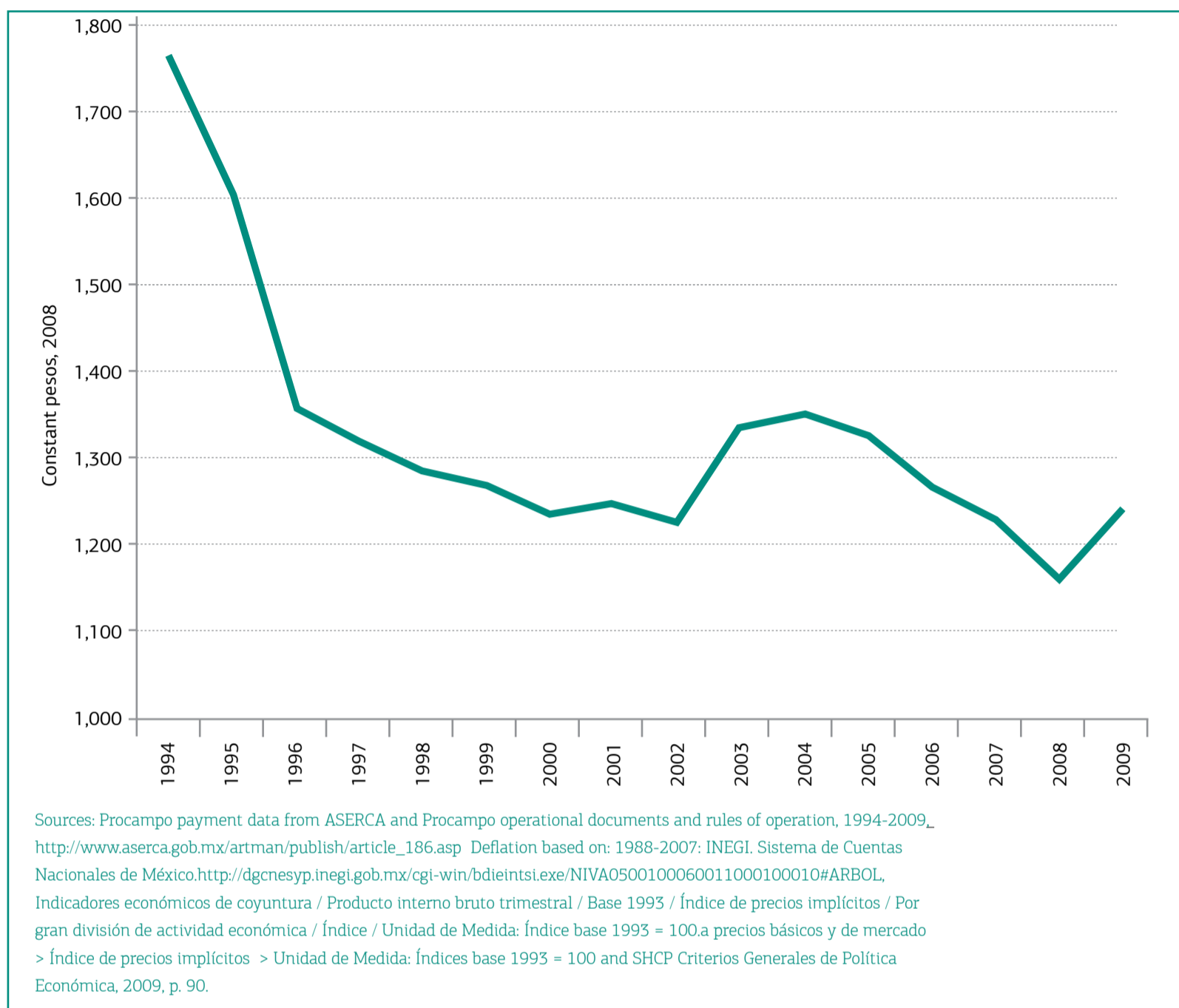
GOVERNMENT SPENDING ON GRAIN SUBSIDY PROGRAMS: CONASUPO AND ASERCA, 1988-2009 (2008 PESOS)



Beginning with the Fox administration's first year, in 2001, agricultural spending began to climb steadily back up, almost doubling in real terms by 2009. Procampo continued to have the largest program budget within ASERCA (Graphs 1 and 3). This growth in spending was driven in part by the clout of farm interests in the legislature, and in part by peasant protests that peaked in early 2003 with the movement called "The Countryside Won't Take Any More".³⁵ The value of Procampo payments in real terms was not restored, however (Graph 4), and Procampo's share of the farm budget fell. Indeed, Procampo's per hectare payments for the smallest farmers (those with less than 5 hectares) lost 29.4% of their peso value between 1994-2009, even after the April 2009 modifications increased their per hectare payment. Graph 4 depicts the changing real value of per hectare Procampo payments for the Spring-Summer harvest cycle, for payments to 5 hectare or smaller plots, including the sliding scale payment modifications of 2003 and April 2009. This per hectare payment was chosen for this indicator because it represents the highest per hectare payment available through Procampo. In contrast, since 2000 the budgets for marketing supports and the Alianza investment subsidy program both grew (Graph 1). The first program benefited almost exclusively commercial farmers, while the second benefited primarily commercial farmers. At the same time, Procampo continued to reach low income farmers, as noted above.

³⁵ See Bartra, Cobo and García (2003), Esteva and Marielle (2003) and Sánchez Albarrán (2007), among others.

Graph 4
 CHANGING REAL VALUE OF PROCAMPO PAYMENTS OVER TIME, 1994-2009
 PAYMENTS IN CONSTANT 2008 PESOS FOR PARCELS OF 5 HAS OR LESS,
 SPRING/SUMMER SEASON



Against this backdrop of changing agricultural policies, what happened to corn after NAFTA? The original debate about NAFTA produced a wide range of predictions, but both advocates and critics agreed on two main points. First, they predicted that the corn opening would encourage a sharp drop in agricultural employment – since most agricultural jobs were in corn.³⁶ Second, analysts predicted that Mexico’s production of corn would also fall in the face of cheaper imports, and as a result corn imports would increase. The data that follows shows that some of these expectations were fulfilled, while others were not.

Farm employment did drop, as expected – continuing a long term trend. Two million workers left agriculture between the 1991 and 2007 agricultural censuses – 19% of the farm labor force, including unpaid family labor (Scott, Table 10A, this volume). Plus, the agricultural share of Mexico’s total employment contracted even more sharply, dropping from 23% in 1990 to 12% in 2008. Yet corn production went up, even though Mexico’s producer price dropped, driven down by falling import prices.

The widely-held view is that while Mexican trade negotiators managed to successfully resist US pressures to include oil in NAFTA, insurmountable US pressures obliged corn to be included in the free trade agreement. This was not the case. It turns out that Mexican trade negotiators acceded to including corn in exchange for the US opening its market to future orange juice imports (Maxfield and Shapiro 1998). This meant that they essentially traded the

³⁶ See Levy and van Wijnbergen (1992), Hinojosa and Robinson (1992) and Robinson, Burfisher, Hinojosa-Ojeda and Thierfelder (1991). Note that De Janvry, Sadoulet and Gordillo contended that those most affected would be small-scale surplus-producing farmers, predicting that “only about half of maize producers will be affected by a change in the sale price” (1995: 1351). As the *New York Times* reported at the time, then- Undersecretary of Agriculture Luis Téllez said that “...within a decade or two... about half of the rural population will most likely be forced to move” (Golden 1991). Elsewhere he wrote: “rural to urban migration... is a *highly desirable* phenomenon, insofar as the rural population can be absorbed by the industrial and service sectors...” (Téllez 1994: 27, emphasis added). Noted migration specialists who were NAFTA optimists predicted that in the medium term, the Mexican economy would generate enough jobs to reduce migration pressures (Cornelius and Martin, 1993, Martin 1993).

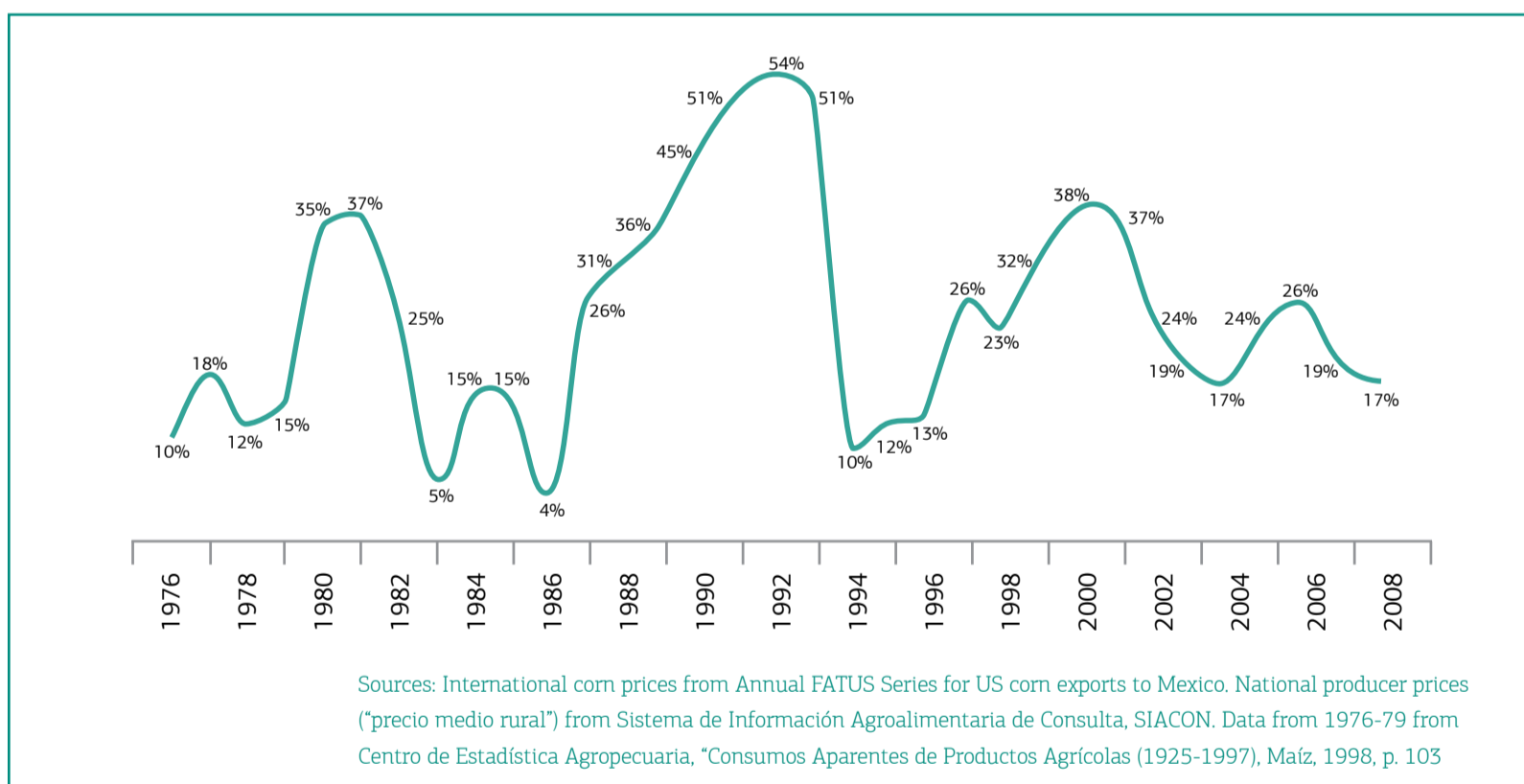
future of the country's main staple crop for a commodity that has yet to become significant in Mexico's agricultural exports. Indeed, interviews with Mexico's leading agricultural trade negotiators show that Mexico's corn opening was not an unavoidable condition imposed by the US, but rather was a deliberate choice by the Mexican government.³⁷ Moreover, after the agreement went into effect, the Mexican government moved quickly to compress the corn trade opening into just a few years, by not applying the 15 year transition period allowed by NAFTA.³⁸ Economists recall that the government's goal was to control urban food prices, to buffer consumers' huge drop in purchasing power in the aftermath of the 1995 peso crisis.

Following NAFTA and the 1995 peso crisis, national producer prices for corn fell substantially. Though Mexico's domestic corn prices had been kept above international prices because of trade protection, their ups and downs had long closely followed international prices (Yúnez Naude and Barceinas 2004: 21). Though international prices drove domestic prices down following NAFTA, they had been driving Mexican corn prices down for many years (see Graph 2). However, the long term trend indicates that exchange rate changes may have had more impact on Mexican producer corn prices, even with trade protection. What changed after NAFTA was the *gap* between domestic producer prices and international market prices. As predicted, the gap narrowed and domestic prices became much more closely aligned with international prices (see Graph 5, also Torres Rojo 2007: 29-30, Contreras Castillo and Gómez Uribe 2009: 97). Meanwhile, the impact of the producer price drop was accentuated by the late 1990s' fall in the peso purchasing power of Procampo's per-hectare compensation payments (see Graph 4 above).

In addition, Mexican grain producers were significantly affected by US farm policies that led to below-cost exports. According to Wise's study in this volume, between 1997 and 2005, the estimated cost of that US dumping was larger than the total value of Procampo transfer payments. He shows that corn producers were by far the most heavily affected, with US\$6.2 billion in losses, an average of US\$94 per hectare, which is more than the average Procampo payment during that period.

Graph 5

GAP BETWEEN DOMESTIC AND INTERNATIONAL CORN PRICES, 1976-2008
(PERCENTAGE DIFFERENCE)



Yet contrary to universal expectations, Mexican corn production *increased* during the post-NAFTA years (Graph 6).³⁹ At the same time, Mexico's grain imports have also increased substantially (see Wise, this volume). While agricultural imports displaced some domestic crops, in the case of corn, *both* imports and production have increased over the past 15 years. Overall

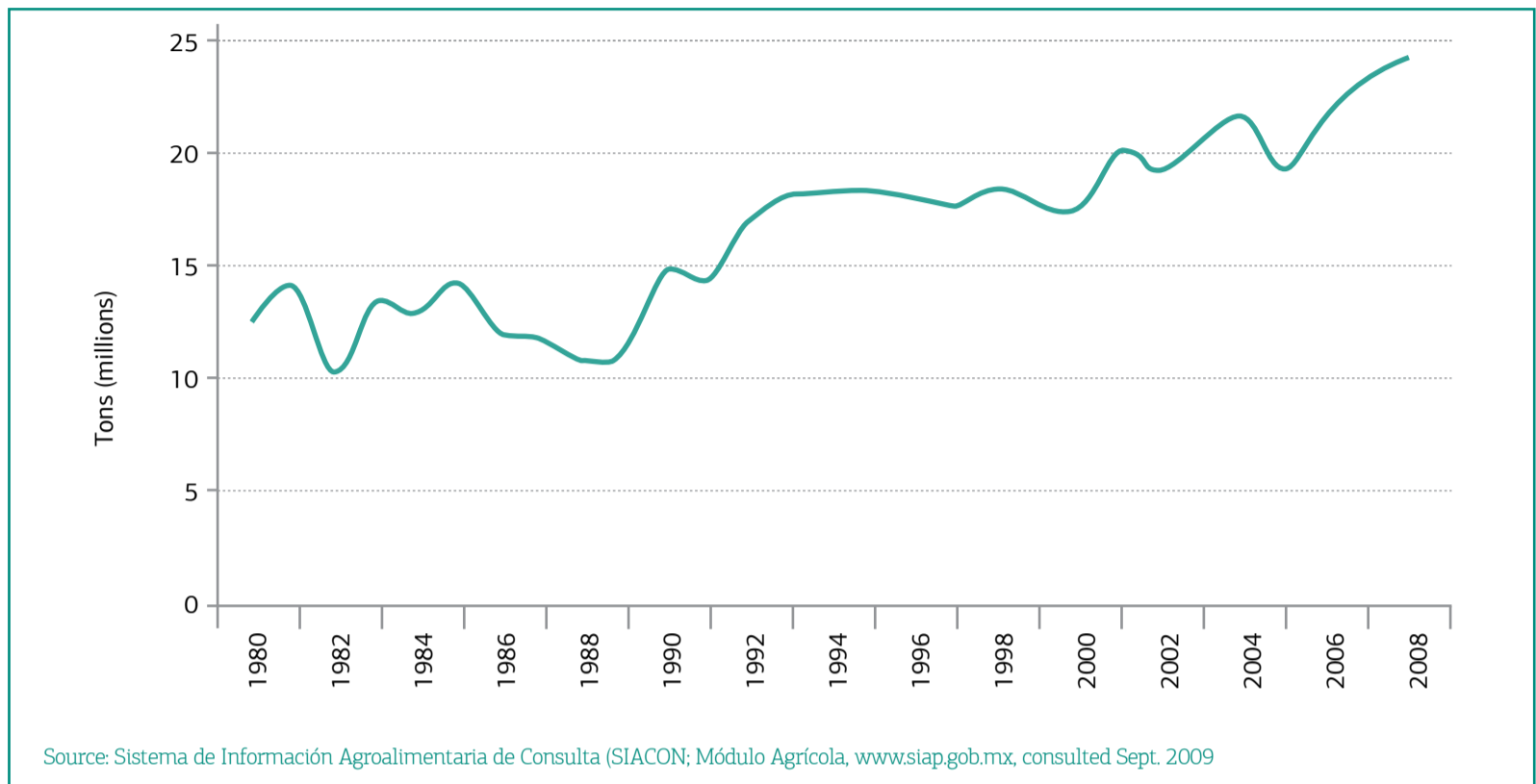
³⁷ As the architect of this policy, Luis Téllez, put it: "It is necessary to include corn, grains in general, to make productive many chains that in Mexico are not productive: grain-based foods like meat and foods made from industrially-processed corn" (interview cited in Lasala Blanco, 2003:87).

³⁸ This little known decision was first highlighted by De Ita (2003), Nadal (1999), Rodríguez Maldonado and Suárez Carrera (1998) and Suárez Carrera (2005). Recent econometric analysis concludes that "the elimination of import permits, combined with the Mexican government's decision to apply zero import fees and not to implement the agreed import duty elimination timeline, are the main factors that explain the reduction of domestic prices for maize producers" Contreras Castillo and Gómez Uribe (2009: 95).

³⁹ While this study does not address the wide range of NAFTA impacts on agricultural production and marketing, see, for a range of perspectives, Avila, Puyana and Romero (2008), Loyns, Meilke, Knuton and Yúnez Naude (2001), Puyana and Romero (2008a, 2008b), Rivera, Chavez and Whiteford (2009), Yúnez and Barceinas (2003).

consumption increased sharply. Remarkably, by the end of the NAFTA transition period, Mexico was largely self-sufficient in white corn for tortillas, while increased yellow corn imports went primarily to livestock producers (see Wise, this volume).⁴⁰

Graph 6
NATIONAL CORN PRODUCTION, 1980-2008

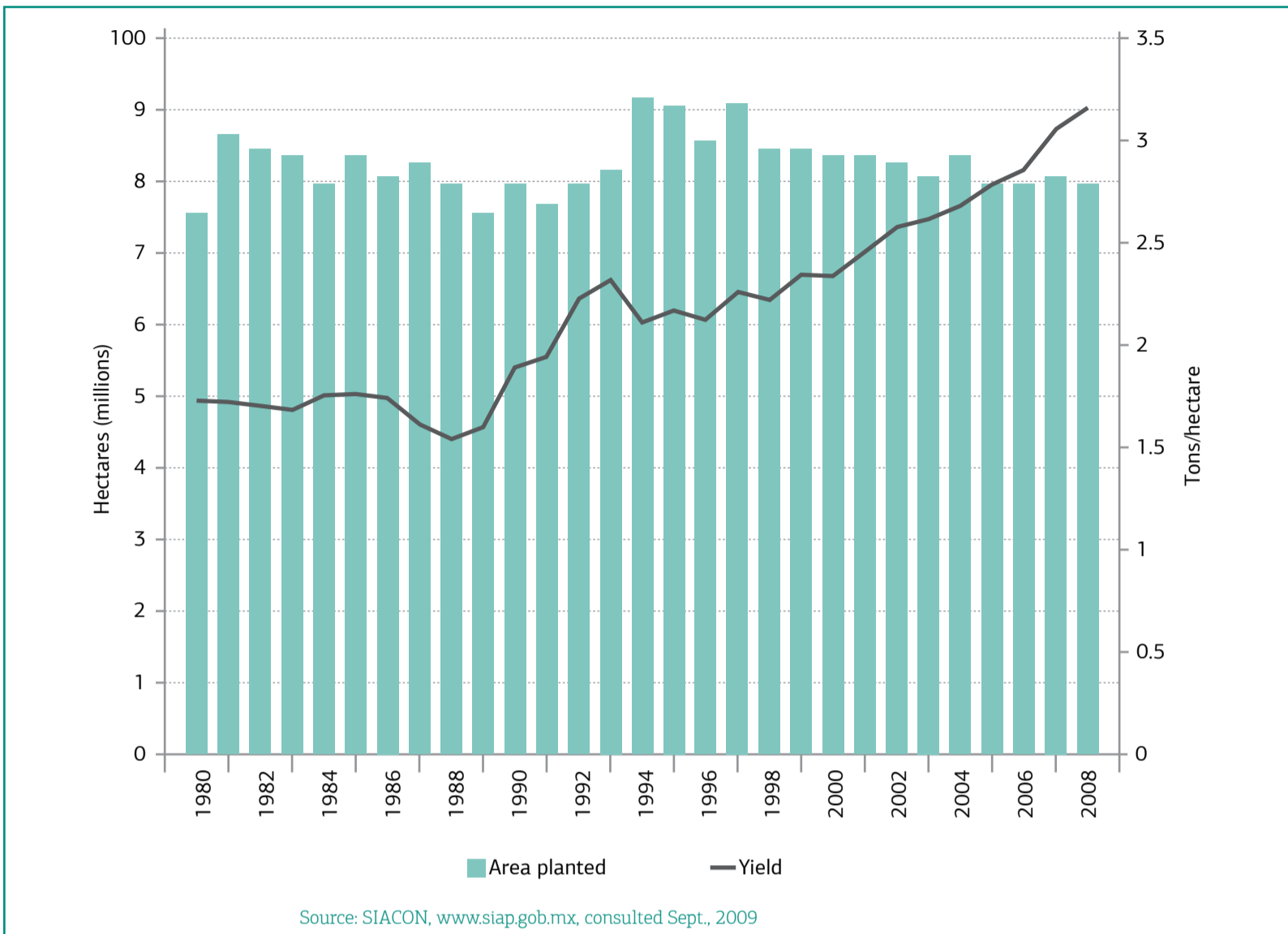


While Mexico's corn production increased since the late 1980s, the area planted with corn did not change dramatically. The rise in domestic production was driven primarily by sustained increases in corn productivity (Graph 7). Average national corn yields more than doubled between 1990 and 2007, reaching 2.8 metric tons/hectare (Robles Berlanga, this volume). The increase in yield is explained partly by the substantial increase in irrigated production (Graphs 7, 8).⁴¹ Dramatic regional differences in productivity persist, a legacy of uneven distribution of quality land and access to water, but the majority of Mexican corn continues to be produced on rainfed land (Graph 8). Among non-irrigated farmers, however, productivity continues to vary widely, depending on their access to credit, technology and reliable rainfall.

⁴⁰ Indeed, US Dept of Agriculture researchers found that in the late 1990s and early 2000s, Mexican consumer prices increasingly favored meat (Zahniser and Coyle 2004: 11). US farm policy favored Mexican meat production through subsidized exports of animal feed, as well as US meat exports, which also reflect subsidized grain (Wise, this volume).

⁴¹ For the evolution of the irrigated share of corn production over time, see also CEDRSSA (2007) and de Ita (2003). The irrigated share first began to grow substantially during the 1991-1995 period, when most grains and oilseed imports had opened up but corn was still protected.

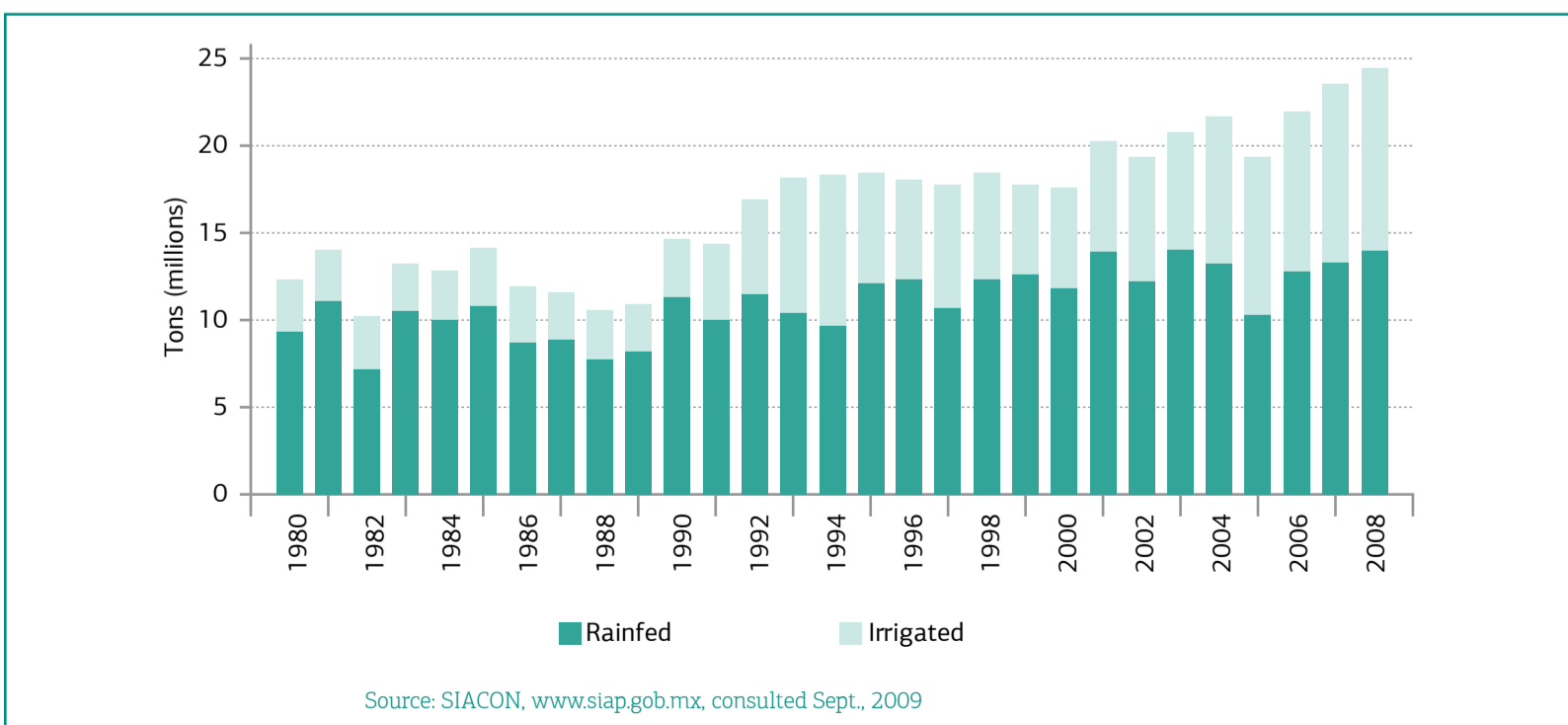
Graph 7
CORN PRODUCTION AND YIELD, 1980-2008



32

In spite of the predictions of the theory of comparative advantage, very few corn producers shifted into other crops (Ceron Monroy 2008, GEA 2006). These dilemmas continue to challenge researchers, who have yet to find a consistent explanation. Lack of smallholder access to investment credit is certainly relevant. Comparison of the 1991 and 2007 agricultural censuses shows that the number of production units with access to formal credit dropped by more than 75%, to fewer than 150,000 (Robles, this volume). One reason for the difficulty explaining the persistence of corn may be that the reasons for continued production vary significantly by type of producer. Because of the way official production data is presented, it is not easy to determine what kinds of producers are responsible for most of the production increase. As a result, researchers have yet to determine what fraction of the increased production comes from larger commercial growers, smaller, surplus-producing farmers and subsistence peasants.

Graph 8
CORN PRODUCTION: RAINFED AND IRRIGATED, 1980-2008



The 2007 agricultural census produced the surprising finding that the total number of corn “production units” did not fall, compared to the 1991 census. This suggests that peasant smallholders continued to be heavily involved in corn production, in spite of its decreased profitability. Meanwhile, the increase in agro-export jobs was not as significant as many expected (Scott, this volume). The overall drop in agricultural jobs was concentrated largely in unpaid family labor. Specifically, unpacking the overall 19% drop in farm jobs between 1991 and 2007, Scott’s analysis of the agricultural census data shows that unpaid family labor dropped 58%, while paid seasonal farm labor rose 151% (by a full 245% for women). This pattern suggests that family farm employment has been dramatically “hollowed-out,” with older landholders continuing to farm their while their sons and daughters have to leave home to find work, as seasonal agriculture workers, in the cities, or the US. This interpretation is consistent with the increased annual out-migration rate during the 1990s⁴²

Analysts differ in their explanations of the ways in which peasant producers respond to changing producer prices. Some analysts propose models of peasant economic behavior that assume that subsistence and sub-subsistence producers, because of their lack of net surplus production and often remote location, are not directly linked to market signals (De Janvry, Fafschamps and Sadoulet 1991). These analysts posited that small and medium-sized commercial corn growers would be the group that would be most affected by NAFTA, representing approximately half of the corn producers (De Janvry, Sadoulet and Gordillo 1995: 1351). Indeed, prices are not the only factor that determines whether peasants grow corn. Many analysts have found that peasants continue to produce corn for domestic consumption as a household survival strategy to preserve some degree of autonomy, in the face of risk, uncertainty and limited employment alternatives. This explanation of persistent smallholder corn production as a defensive strategy is reinforced by the cultural emphasis on both consuming and preserving native varieties of corn.⁴³

In this context, note that many government policymakers hold a very different view of the persistence of peasant corn production for household use. As a recent large magazine display advertisement by the state government of Chiapas put it, “corn produced for household consumption perpetuates poverty...” (Nexos, Dec. 2009, p. 89). This view assumes that smallholder corn is the *cause* of poverty, but most analysts who do fieldwork would contend that the causal arrow goes the other way – that persistent corn production is a *response* to poverty, and to producers’ lack of access to less risky economic alternatives.

To make the transition from corn to less well-known crops requires reliable access to appropriate inputs, markets and technical support – all of which are in very scarce supply for low-income producers. Prudent risk management often leaves them with the corn they know well. In addition, for smallholders, membership in autonomous, representative producer organizations is usually necessary – though far from sufficient – for reliable access to affordable inputs and crop markets, not to mention access to government support programs (Echánove and Steffen 2003, Palmer Rubin, this volume). Yet those representative smallholder organizations that have survived – most were formed in the 1970s and 1980s, when reformists in the federal government offered some degree of support – are barely holding on in what has long been a very inhospitable policy environment (Fox 2007a).

Recent models of peasant economic behavior offer additional explanations for persistent corn production. In this view, because of the linkages between producer prices for corn, the cost of labor and the cost of renting land in remote areas, when producer prices fall, better-off producers are less likely to employ local labor and more likely to rent their land, which encourages the rural poor to increase production even though their overall income falls (Dyer, Boucher and Taylor 2006). Other analysts of the peasant economy add that sub-subsistence producers often sell their harvest to meet immediate needs and then buy corn back later in the year with wage income (Bartra 1994). Some net buyers are therefore also sellers. In summary, analysts from diverse perspectives agree continued corn production by small-scale rainfed producers is widely seen as a form of self-defense or social insurance.

For commercial producers, the reasons for increased corn production may be much simpler – ASERCA programs offered substantial economic incentives (Yúnez-Naude and Taylor 2006). Continued access to Procampo payments requires sustained crop production – and the program is therefore a conditional cash transfer (though not as directly tied to volume of produc-

⁴² In 2008, Mexico’s migrants were still disproportionately of rural origin (51%) and reported their occupation as agricultural (49.5%), according to the regular government-sponsored exit survey of border crossers (Encuesta EMIF Norte, cuadro 2.2.07, www.conapo.gob.mx)

⁴³ See Barkin (2006), Cortés Vázquez and Díaz Hinojosa (2005), Dyer and Yúnez-Naude (2003), Luna Flores (2004) and Yúnez-Naude (2007), among others. The many field-based studies that stress the consumption logic behind household production include Arslan and Taylor (2009), Appendini, Cortés and Díaz Hinojosa (2008), Appendini, García Barrios and De la Tejera Hernández (2008), Díaz Hinojosa (2008), Esteva and Marielle (2003), Reyes Guzmán, Guerra Navarro and Calderón Ponce (2005), and Rivera, Chavez and Whiteford (2009) among others.

tion as are the Marketing Support programs). Moreover, official evaluations found that few producers were actually aware that they had the right to change crops – so few did (GEA 2006). Yet though Procampo's incentives have consistently reached more than two million recipients, ASERCA's Marketing Support programs offer much more generous additional inducements to fewer than 150,000 producers, in the case of Ingreso Objetivo. An even smaller group of commercial buyers, processors and other large agribusiness entities are subsidized by ASERCA's other Marketing Support sub-programs, such as those discussed in Box 3.

BOX 3:

LARGE PAYMENTS OF GRAIN MARKETING SUBSIDIES GO TO TRANSNATIONAL CORPORATIONS

Libby Haight (UCSC/IBP)

In addition to its two direct payment programs for farmers, Procampo and Ingreso-Objetivo, ASERCA also operates numerous additional large-scale marketing support programs. They primarily benefit large corporations that buy, sell and process grain, under the rubrics of insurance, storage, futures markets, transportation, export subsidies, feedgrain for ranchers and contract agriculture. ASERCA has operated such corporate funding programs since its founding, which consistently account for a significant share of its annual budget (official data limitations prevent determining the precise percentage). In recent years, this array of little-known marketing subsidy programs has received a growing share of ASERCA's non-Procampo budget (see Graph 2 above).

Moreover, many of the commercial farmers who supply these large-scale industrial processors are themselves recipients of both the Procampo and Ingreso-Objetivo subsidies, which means that the same grain is in effect subsidized by a multitude of different programs, while the vast majority of smaller farmers receive either just Procampo or nothing at all.

The public versions of these programs' lists of beneficiaries are significantly more opaque than ASERCA's data on recipients of other farm subsidies (see Haight and Fox, this volume). The programs' fragmented nature also complicates efforts to see how marketing subsidies are actually distributed. Repeated public information requests were necessary to begin to reveal the degree to which payments were concentrated in large corporations.

Even transnational corporations receive large marketing subsidies. Recent coverage of agricultural subsidies in the national newspaper, *El Universal*, highlighted that Cargill has received over 500 million pesos in Marketing Support payments between 2005-2009 (Hernández and Alvarado 2010, see also Ramírez 2009). Interestingly, Cargill responded to this coverage by defending the fact that their subsidy payments do not translate into "any direct benefit" for the corporation, but rather are passed along to farmers due to the fact that Cargill pays a higher price for the crops they purchase (*El Semanario*, 2010).

In other words, Cargill claims that this program reimburses the company for higher prices paid to farmers, and therefore it does not profit from the subsidy.

Ultimately, Cargill's defense of their subsidy payments indicates that ASERCA's Marketing Support programs are basically functioning like a privatized CONASUPO. Rather than letting the market dictate prices, ASERCA is both paying farmers directly to compensate for differences in domestic and international prices through Ingreso Objetivo, while also paying purchasing companies directly to buy at higher prices than the market otherwise indicates. Instead of the government running the grain market at artificially high prices, the government is now paying private corporations to do so – and paying as many as three different subsidies for the same grain (Procampo, Ingreso Objetivo and Marketing Support). Given that such large sums are concentrated in a relatively small number of private grain purchasers, acting not unlike an oligopoly, in addition to the overt acknowledgement that these payments intervene directly to influence grain prices, it is unclear how ASERCA's Marketing Support programs are more "free-market-oriented" than the previous state-owned system.

Table 4 shows the large payments channeled to US and Mexican transnational corporations in 2008 alone. Because of limited public access to both corporate ownership

and subsidy data, it is extremely difficult to know with certainty whether or not these are the *total* amounts of payments that these companies received under these subsidy programs. As a result, Table 4 represents only the minimum amounts of explicitly documented corporate payments from ASERCA's Marketing Support programs for one year.

Table 4

PAYMENTS TO TRANSNATIONAL CORPORATIONS THROUGH MARKETING SUPPORT SUBSIDY PROGRAMS, 2008

Company Name	Amount paid in ASERCA Marketing Support subsidies, 2008 (M\$)
COMPAÑÍA NACIONAL ALMACENADORA SA de CV*	318,932,285.46
CARGILL de MEXICO SA de CV	196,634,344.68
MINSA SA de CV	163,031,660.49
BACHOCO SA de CV	116,222,116.31
ADM MEXICO SA de CV	16,977,991.90

* Note: This is not an exhaustive list. *Compañía Nacional Almacenadora SA de CV* is a subsidiary of MASECA, though it is not the only MASECA-related company receiving subsidies through these programs. Information on BIMBO's subsidiaries was unavailable at the time of this report, and therefore BIMBO is not included on this current list.

The totals presented include all appearances of these companies in ASERCA's recipient lists for the combination of Marketing Support programs (excluding Ingreso Objetivo). These include: *Apoyos Directos a Coberturas de Precios de Productos y Especies Elegibles, Apoyo a la Pignoración del Maíz Blanco, Esquema de Compras Anticipadas de Maíz Blanco, Apoyos a la Agricultura por Contrato de Maíz Amarillo y Sorgo, Apoyo a Fletes de Granos y Oleaginosas, and Apoyo a la Exportación de Granos y Oleaginosas.*

It is notable that, included in the overall total listed above, Cargill-Mexico received M\$11,166,868 under a program of *export subsidies for white corn.*

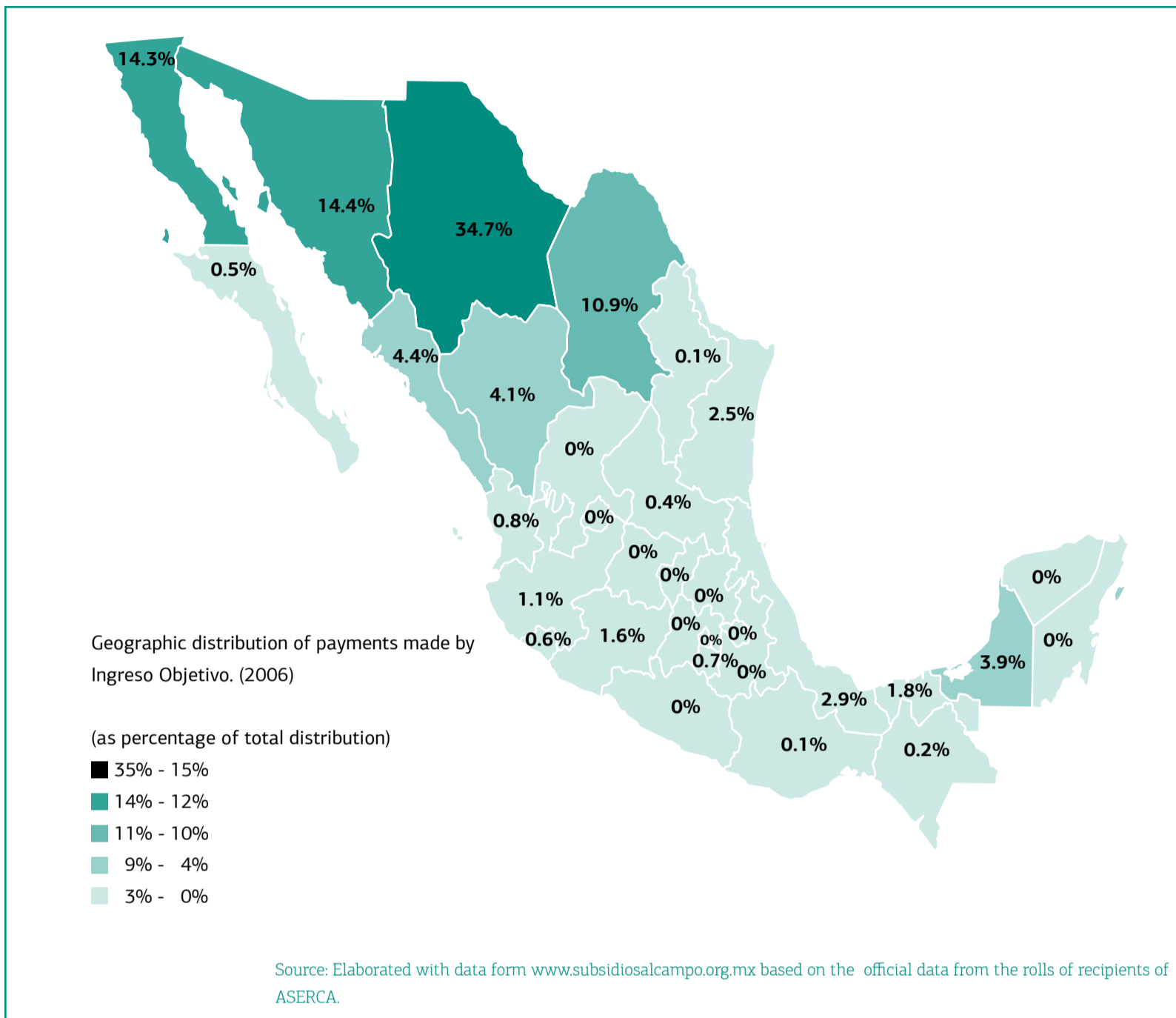
Source: ASERCA official recipient lists available at, <http://www.ASERCA.gob.mx/subhomes/NuestrosProgramas.asp>, under the heading "Programa de Atención a Problemas Estructurales (Apoyos Compensatorios)". Each sub-program presents its own recipient lists, and were downloaded separately. Files were downloaded December 7-10, 2009. Totals were calculated combining the amounts listed in each sub-program's recipient lists wherein the above-listed names appear. See also ASERCA (2008).

In terms of its impact on production, as mentioned, the Ingreso Objetivo program specifically offers a select, small group of commercial growers bonus payments that made up the difference between the domestic and international price for key grains, most notably corn (until 2007-2008, when the international price for corn spiked, the program's budget fell and payments shifted to cotton and other crops). Remarkably, this program, when corn played the largest role in support payments, directly subsidized a much larger fraction of the corn crop than Conasupo used to buy, even in its heyday.⁴⁴ *Between 2000 and 2005, Ingreso-Objetivo subsidized a full 70% of national marketed grain and oilseeds*, according to the most comprehensive official evaluation (ASERCA 2006).⁴⁵ In other words, a small minority of well-off producers received sustained protection from international competition, while most did not.

⁴⁴ For example, between 1980 and 1988, the share of the national corn crop purchased by Conasupo varied from 11% to 25% (Conasupo 1989)

⁴⁵ This evaluation was originally made public on ASERCA's website, but it is no longer available. Moreover, unlike most official "external" evaluations, its authorship is not specified.

Map 6

GEOGRAPHIC DISTRIBUTION OF INGRESO OBJETIVO SUBSIDY PROGRAM
(PERCENTAGE BY STATE, 2006)

The impact of the Ingreso Objetivo program goes beyond subsidizing larger commercial growers and keeping national grain production at unprecedented levels. By design, access to the program was confined to a relatively small number of producers.⁴⁶ According to an in-depth economic analysis commissioned for the Mexican government by the Inter-American Development Bank, because of its huge scope, the Ingreso Objetivo depressed the corn prices received by Mexico's other producers. Their model found that elimination of the program would increase the income of non-participating producers by 6%, while saving both consumers and the government more than two billion pesos (Sumner and Balagatas 2007: 44).⁴⁷ Their findings reveal a stark conflict of interest between a small number of Ingreso-Objetivo beneficiaries and the rest of Mexican corn growers.⁴⁸ Indeed, this program put Procampo in the position of having to compensate *both* for the impact of international price competition *and* a domestic deficiency payment concentrated in a small sub-set of well-off farmers. The Treasury Ministry implicitly recognized some of the issues with Ingreso Objetivo, recently renamed (along with the remaining Marketing Support sub-programs) as "Apoyos Compensatorios."

⁴⁶ The program rolls peaked at approximately 144,000 registrants in 2006, but the official program roster presented to the public allows individual producers to register more than once, so the total number of actual individuals covered is uncertain. See further discussion of problems with ASERCA's lack of full public disclosure of who gets what from farm subsidies in Haight and Fox (this volume).

⁴⁷ Previous technical work by other multilateral agencies had underscored the extremely regressive nature of the distribution of marketing support payments, but had not made the direct connection to reduced grain prices for non-participants (World Bank 2004, OECD 2006).

⁴⁸ In response to a public information request from the public interest group Fundar, the Mexican Finance Ministry declared this study confidential, based on the claim that public dissemination would risk damaging relations with the IDB. The request was appealed to the IFAI, which asked the IDB for its assessment of the Finance Ministry claim. In the absence of a prompt reply, the IFAI ruled in favor of the release of the document to the requestor, and the Finance Ministry complied. The IDB belatedly replied to the IFAI's query, in support of the Finance Ministry's claim. See the IFAI resolution 0000600044909, <http://www.ifai.org.mx/resoluciones/2009/2160.pdf>.

8. WHERE DO CORN CONSUMERS FIT IN?

Assessments of the winners and losers following NAFTA are further complicated by unexpected price trends on the consumer side. Economists expected that cheaper imports would keep urban corn consumer prices down. In this context, the government ended subsidies for urban corn consumers, first by eliminating generalized tortilla subsidies in the mid-1990s and then by ending a large-scale, means-tested free tortilla program in 2003.⁴⁹ Urban food subsidies continue to be delivered via the longstanding milk program and through a component of the Oportunidades social welfare program (15% of its participants are in cities).

Yet NAFTA's opening to cheaper imported corn did not turn into a clear win for Mexico's corn consumers. Urban tortilla prices have increased at a much higher rate than the price of imported corn, as shown by comparisons of international corn prices and domestic tortilla price trends (Zahniser and Coyle 2004, and Simmons, Box 4, below). This indicates that corn markets continue to be "imperfect," even in large urban areas. The persistence of these marketing problems is remarkable, in light of ASERCA's long-term emphasis on "marketing supports" (direct payments) to private firms, justified with the goal of encouraging competitive markets. Diverse researchers find that persistent imperfections in local, regional and national corn markets remain very significant (IMCO/World Bank 2007, Robles Vásquez and García Barrios, 2008). Disconnects between domestic and international prices following the 2007 spike raised additional questions about how actually-existing corn markets work in Mexico (De Ita 2008, García Rañó and Keleman 2007, Hernández Navarro 2007). On balance, the government's 15 years of targeting opaque marketing subsidies to a small number of large farmers and private firms appears to have fallen far short of the policy goal of encouraging more efficient and competitive national grain markets.

In terms of consumer prices, the main beneficiaries of cheaper imported corn appear to have been those urban consumers who could afford industrially-produced meat. According to standard economic theory, if Mexico had a single, competitive national corn market that "cleared," translating import prices consistently throughout the country, net rural corn consumers – that is, landless farmworkers and sub-subsistence producers -- should benefit from cheaper imports. Yet this does not appear to have happened. First, the relationship between cheaper imported yellow corn and rural consumer prices is not clear, since rural consumers continue to have such a strong preference for Mexican white corn. After all, Mexican consumers are well aware that imported yellow corn is animal feed. Second, lower imported corn prices at the border do not necessarily translate into lower prices in remote rural consumer markets, because of imperfect, fragmented markets and high transportation costs.

Meanwhile, the government still plays a role in buffering the potential conflicts of interest over corn prices between producers and consumers by making low-cost corn and other staple foods available to low-income rural consumers through community-managed village stores, especially in southern Mexico. Diconsa, one of the last institutional remnants of Conasupo, supplies these 23,000 village stores with basic foods at prices that include a subsidy for the cost of transporting the commodities to remote areas. These stores provide a safety net of food security for the net corn buyers who make up a majority of the rural population (Guerra Ford et al 2005a, 2005b, see below). In response to the 2003 "The Countryside Won't Take Any More" protest, Diconsa also stopped supplying the village stores with imported animal feed and instead began providing Mexican white corn on a large scale. These village stores' sales of basic staple foods bolsters local food security and keeps consumer prices down, covering an estimated 90% of villages (Yúnez-Naude 2007).

Diconsa stores are highly geographically targeted to low income rural communities. In 2005, 67.3 percent of stores were in villages ('localities') considered to be either high or very high 'marginality'. If one also includes villages considered to be of 'medium marginality', where two-thirds of the population earned less than twice the minimum wage, then 86 percent of stores were located in low-income communities (Haight 2006). The rural food store system also has the most effective, broad-based, community-based oversight system of any national social or economic program in Mexico, through a pioneering, large-scale experiment in what has come to be called "contraloría social," or "social oversight." In spite of waves of either hostility or indifference from senior policy-makers over the past decade, the Diconsa store network has survived largely because of its broad-based constituency of organized beneficiaries, who are among the poorest of the poor (Fox 2007a).

⁴⁹ During its first decade, the tortilla program had been widely considered to be inefficient, as well as a tool of electoral clientelism, but the final official evaluation concluded that it had improved substantially once its management had been transferred to Liconsa in 1999 (Soto Romero 2004). In addition, government nutrition experts found that the program had substantial positive impacts (Shamah Levy et al 2003). The policy decision to eliminate the program was apparently not informed by the government's then-new external evaluation process (see Fox and Haight, Box 6 and González Arreola, 2010).

BOX 4: FOLLOWING NAFTA, TORTILLA PRICES DID NOT DIRECTLY REFLECT INTERNATIONAL CORN PRICES

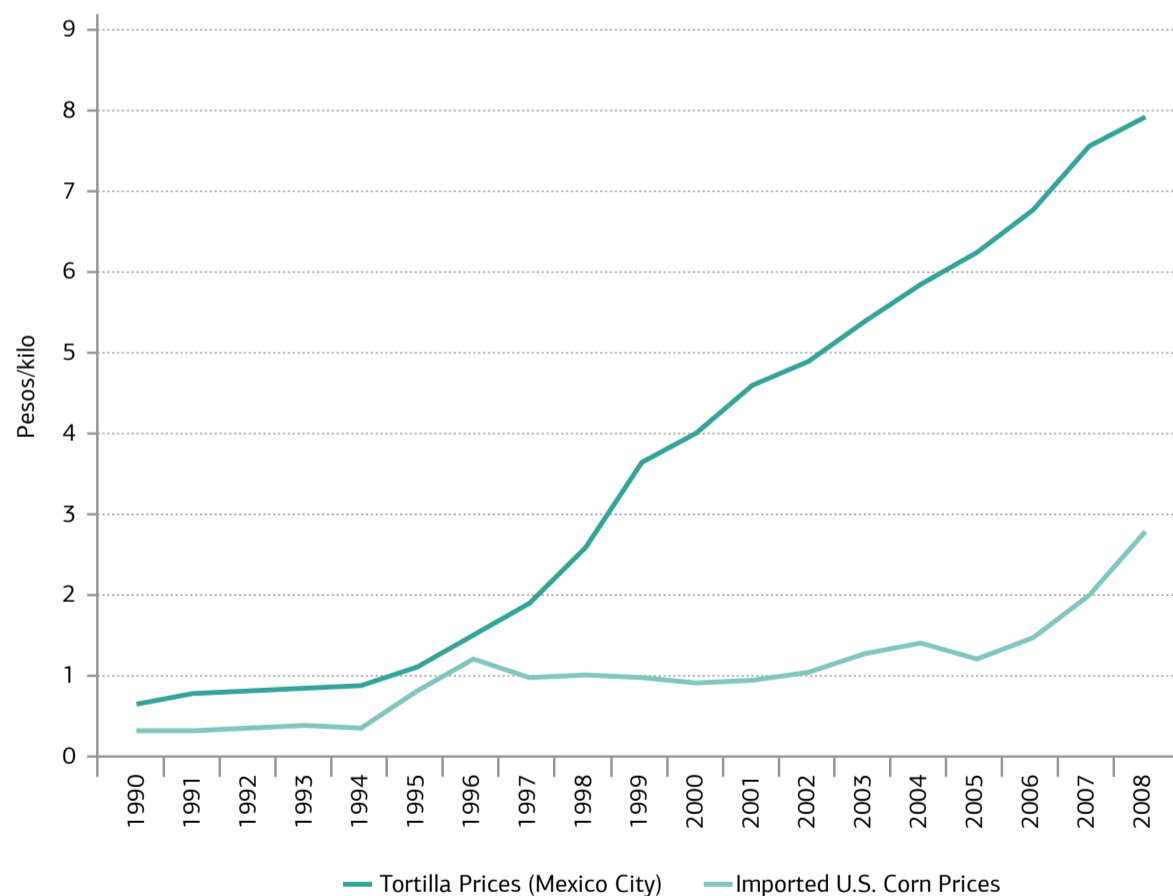
Erica Simmons (University of Chicago)

For over ten years, the price of tortillas in Mexico City rose sharply, while the price of corn imported from the United States remained almost flat, in constant peso terms. NAFTA's promise of lower consumer prices for Mexicans proved elusive. Yet in recent years, as the price of imported corn began to increase, tortilla prices did not keep pace. Since 2004, the price of corn imported from the U.S. has increased nearly 100%, while tortilla prices have gone up only 35%, according to the federal government's price data for Mexico City. This recent trend in corn price increases is often linked to international demand and subsidies for ethanol.

Government policy appears to be a key factor accounting for why tortilla prices have not uniformly followed international prices. After a rapid spike in tortilla prices in late 2006 and early 2007, the Calderón administration quickly intervened, establishing a voluntary "price pact." Participating large-scale retailers and processors agreed to cap tortilla prices at 8.5 pesos/kilo and corn flour prices at 5 pesos/kilo and the pact has been renewed at least twice. Indeed, the head of the Unión Nacional de Industriales de la Masa y la Tortilla claimed that the government spent MX\$4 billion in subsidies to corn processors, in a little-known program designed to keep retail prices down during 2007 and 2008 (González 2009). In spite of an official ideology of deregulation, state intervention continues to play a significant role in Mexican corn markets.

Graph 9

PRICE TRENDS FOR IMPORTED CORN AND TORTILLAS



Sources: Annual data on the value of U.S. corn exports to Mexico was converted to pesos using nominal exchange rates listed at: <http://www.ers.usda.gov/Data/ExchangeRates/Data/NominalMonthlyCountryExchangeRates.xls>. Base year for all data is 1990. Tortilla prices are annual averages.

Sources: United States Department of Agriculture (annual value of corn exports to Mexico), Secretaría de Economía de México (Mexico City tortilla price data), and Banco de México (tortilla price index). For official price data on tortillas, see: <http://www.economia-sniim.gob.mx/>

9. CORN POLICY AND ENVIRONMENTAL IMPACTS

The relationship between national corn policies and local environmental impacts is not well-understood.⁵⁰ Procampo's original decree argued that direct payments should encourage conservation, restoration and reduce erosion and pollution. The rules of operation mentioned the possibility of getting payments for "ecological projects," subject to Environment Ministry approval. According to a Mexican congressional research center report, however, "in reality... the ecological projects... are no more than a few references in official documents... The external evaluations... make no reference to any environmental components or indicators, simply because they do not exist" (Peña Garza 2009: 6). In practice, in spite of the nominal official regulation of changes in land use, for example from forest to pasture, according to the author of this volume's field survey of producer perceptions, "in all of the offices of SAGARPA or state rural agencies, any ecological issue is considered an irritation."⁵¹

The agroecological impacts of Procampo have received little attention from program evaluators and scholars, but the most rigorous studies so far indicate that the program encourages deforestation in biodiversity hotspots (Schmook and Vance 2009). Procampo requires land be cropped continuously, which undermines the sustainability of agroecological methods that traditionally left lands fallow (Klepeis and Vance 2003). Moreover, the widespread producer perception that the Procampo program prohibits changing crops further limits rotation.

The future of Mexican corn is likely to be strongly influenced by seed policy decisions. The Mexican debate over future seed technology has been dominated by the question of whether to permit experimentation and use of genetically-modified organisms (GMOs). This issue is especially controversial because of Mexico's historic role as the source of domesticated corn and as a major resource in terms of corn biodiversity. Advocates claim that GMOs are essential to increase productivity, while critics express concerns that GMOs threaten corn biodiversity. While the planting of GMO corn has been prohibited since 1998, a recent scientific assessment concluded that "unintended transgene flow into Mexican landraces has been confirmed..." (Piñeyro Nelson et al 2008: 11). These specialists also found that that conventional techniques for measuring the presence of transgenes in native varieties produces "false negatives," leading them to conclude "it is urgent to establish rigorous... criteria for biomonitoring at centres of crop origination and diversification" (2008: 11). Nevertheless, Mexico's Agriculture and Environment Ministries recently decided to permit experimental planting of GMO corn on 22 farms in four northern states. Yet the government's National Biodiversity Commission has expressed skepticism, strongly recommending the continuation of the moratorium (See Box 5). Debate continues over whether the recent approval of experimentation permits is consistent with the 2005 Biosafety Law on GMOs.⁵²

To put the potential contribution of GMO corn in context, Mexican average corn yields have increased by more than 63% since 1980 – on average (CEDRSSA 2007). In other words, Mexican corn producers have demonstrated substantial room for increased productivity based on non-GMO improved seeds. Much of this improvement appears to involve irrigated corn. Meanwhile, research to increase the yields and resilience of native seeds under rainfed conditions has not received substantial government attention in recent decades.

⁵⁰ For initial overviews, see De Ita (2003) and Nadal and Wise (2004)

⁵¹ Mauricio Maldonado, personal email communication, Nov. 18, 2009

⁵² On the policy debate, see CEC (2004), Lloyd (2009), McAfee (2008) and Massieu Trigo (2009), among others.

BOX 5:**SELECTED RECOMMENDATIONS FROM THE GOVERNMENT'S NATIONAL COMMISSION FOR THE KNOWLEDGE AND USE OF BIODIVERSITY (CONABIO) STUDY: "ORIGIN AND DIVERSIFICATION OF CORN: AN ANALYTICAL REVIEW"****Takeo Kato et al (CONABIO)**

- 10:** Reinstallation and maintenance of the moratorium on the introduction of transgenic maize in Mexican territory is recommended until: 1) the centers of origin and diversity are precisely identified, 2) infrastructure necessary for the control of transgenic maize is in place, 3) the degree of transgenic contamination of maize varieties throughout the country is determined; 4) research relevant to the impact of transgenic maize in Mexico is carried out, and 5) programs for the protection, conservation and improvement of maize races are developed.
- 11.** The Law on Biosafety of Genetically Modified Organisms must be modified: current concepts of centre of origin, centre of diversity and the articles related to them must be substantially changed because they do not agree with the scientific evidence...
- 13:** To protect the genetic diversity of maize, it is necessary to protect more than two million small scale or marginalized farmers in the country. They are the guardians of the native germ-plasm of maize: they retain, maintain and even modify the genetic diversity present in their territories through exchange, gene flow, and the testing of new seeds. They must be supported through subsidies, technical assistance and rural development programs.

Source: Kato et al (2009: 12)

Note: This is the document's official English translation. This report became publicly accessible on-line in January 2010, three months after it was officially released (Sarukhán 2009)

10. RURAL POVERTY AND SUSTAINABLE FAMILY FARMING: THE MISSING LINK IN AGRICULTURAL POLICY

In conclusion, Mexico's lack of a pro-poor agricultural policy appears to reflect ineffective representation of low-income producers in the policy process. Some of Mexico's largest, traditionally partisan peasant organizations have allied themselves with agribusiness interests in favor of preserving current farm subsidy policies and increasing governors' discretionary funding (Pérez 2009, Merlos, Arteaga y Arvizu 2009). Since 2001, dominant rural interest groups have closed ranks and successfully influenced congress to steadily increase overall agricultural spending, without changing the policies that allocate most of the funds to the wealthiest producers. Meanwhile, autonomous peasant organizations gained additional representation in Congress during the 2003-2006 term, and peasant protest in 2003 increased their leverage to promote a legislative initiative to create essentially a Farm Bill for Mexico.⁵³ This bill involved long-term budgeting and policy planning, and reform of major programs, such as Procampo, to increase their pro-poor focus and responsiveness to farmer needs. After approval in Congress in 2006, the legislation stalled in the Senate. Looking back, during this period rural legislators of diverse persuasions were able to increase appropriations for agriculture, but the pro-small farmer contingent did not manage to change the way funds were spent.

Looking outside the Federal District, many autonomous regional organizations have long attempted to represent the rural poor in the policy process, at both national and local levels (Fox

53 The Ley de Planeación para la Soberanía y Seguridad Alimentaria y Nutrición.

2007a). For decades, these non-partisan membership organizations have sought to form partnerships with open-minded public sector officials to encourage more effective community economic development and public service delivery, most notably at the regional level. Yet they have rarely found willing partners in the public sector, and Mexico's transition to a competitive electoral system did not open new doors, in spite of the change in the party in power. These organizations' efforts to compete for policymakers' attention with entrenched vested interests face enormous challenges. In many rural regions, the lack of guaranteed freedom of association, effective public security and the administration of justice sharply limits the capacity of low-income citizens to exercise voice to defend their interests and encourage greater public sector accountability.

Against this backdrop of under-representation of *campesino* interests in the agricultural policy process, many family farmers emigrate while others persist. The result is a growing gap between a shrinking share of the population employed in agriculture and the size of the rural population overall. To an ever-increasing degree, this rural population survives on remittances, wage labor and government transfers. As noted, overall agricultural employment dropped substantially during the post-NAFTA period, from 10.7 million jobs in 1991 to 8.6 million in 2007, according to the two most recent agricultural censuses. Agriculture's share of Mexico's jobs overall also fell substantially, from 23% in 1990 to 13% in 2008 – as predicted by both advocates and critics of NAFTA at the time. At the same time, the *rural* share of Mexico's population was still at 23.5% in 2008, having declined much more slowly. In 2005 the census agency considered 24.7 million people to be rural, counting only those living in communities of under 2,500 inhabitants (other analysts argue for a 15,000 cutoff). In contrast, if one applies the OECD criteria of rurality based on population density, the “predominantly rural” population rises to 32.7 million (Figueroa Sandoval 2008: 8).⁵⁴ In other words, Mexico's rural population continues to represent somewhere between one quarter to one third of the national population, depending on one's definition. This growing gap between Mexico's shrinking agricultural employment and a large rural population that is increasingly supported by breadwinners who must earn income far from home reveals the growing degree to which millions of families are separated, with the corresponding unquantifiable social and cultural costs.

In this context, it is important to recognize that Procampo has unfulfilled potential to begin to address rural out-migration. There was no policy decision to target Procampo investments to higher out-migration areas, and there is no correlation between the geographic distribution of Procampo funds and state out-migration levels. Yet more fine-grained econometric analysis finds that when the distribution of Procampo funds is disaggregated to the municipal level, taking into account impact on local labor markets, the program does help to reduce out-migration (Cuecuecha and Scott, Box 7 and 2010).⁵⁴ In spite of this incremental impact, however, large-scale surveys find that 43.6% of Procampo participants surveyed had a family member who migrated since 1994 (GEA 2006: 115).

In a context in which rural income comes primarily from outside the rural sector – from wage remittances and government transfers -- the prospects for the rural economy to be able to support more of the rural population still depend primarily on agricultural jobs. In spite of longstanding hopes for productive rural non-agricultural employment, they have not been fulfilled on any scale. The future of most agricultural employment, in turn, depends on the fate of Mexico's family farms, insofar as very small farms -- those with less than 5 hectares – still account for *two-thirds* of Mexico's agricultural employment (Scott, this volume). In other words, each peso in farm subsidies that goes to larger farmers generates less employment than if the same peso went to smaller farmers. Yet as this report shows, Mexico's farm subsidies mainly go to larger farmers. As a result, as long as Mexico's agricultural policy excludes the goal of making more small family farms economically viable, the outcome will be persistent poverty and more out-migration.

⁵⁴ González-Konig and Wodon reach similar conclusions.

BOX 6: EVALUATING EVALUATIONS

Jonathan Fox (UCSC) and Libby Haight (UCSC/IBP)

In the late 1990s, the Mexican government attracted worldwide attention for its use of highly professional external evaluations to assess its new flagship social program, then known as Progresá. Beginning in 2001, the Mexican government began to require all federal programs subject to “rules of operation” to commission external evaluations, which were delivered to congress. Beginning in 2003, agencies were mandated to make these program evaluations publicly accessible on-line. The Mexican government had carried out numerous program evaluations beforehand, dating back at least through the 1980s, but only at the discretion of policymakers – and they remained strictly confidential and were not even disseminated within the public sector.

The government’s current mandate to commission evaluations covers programs that deliver direct subsidies, such as Procampo and Ingreso-Objetivo, but does not cover programs that deliver indirect subsidies, such water and electricity for farmers with irrigation, nor do they address programs operated by state governments. Alianza was an exception, however, having been subject to a decade of evaluations jointly managed by Sagarpa and the FAO.⁵⁵

The official evaluations are carried out by third parties, but their degree of actual independence varies. In practice, the evaluators are chosen by the agencies themselves, which set the evaluators’ agenda. It took several years for the evaluation results to become more consistently accessible to the public (Fox and Haight 2007). Some significant evaluations did not remain on agency websites. For example, one of most revealing evaluations of ASERCA’s Marketing Support programs, covering FY2006, is no longer available on their website (ASERCA 2006).

Very few Mexican evaluations follow the standards set by Progresá, which sought to determine impact with scientific rigor by using control groups. Some do document results, though their scope is constrained by the fact that both the evaluation agenda and the evaluating entity are usually determined by the agency in question. As a result, most Mexican program evaluations focus primarily on compliance with administrative rules, without questioning the parameters set by the agency under evaluation. Some assess program coverage of target populations and carry out large-scale surveys that assess client satisfaction (e.g., Guerra Ford 2005a, 2005b). Others document rates of client satisfaction without addressing target populations that are excluded from the program (e.g., ASERCA 2006, GEA 2006). In other words, interested parties influence the evaluation agenda (the agency to be evaluated), others influence the findings (those with access to the programs), while the views of stakeholders who are excluded from the programs are not addressed.

To encourage congress to focus more on lessons from the evaluation experience so far, Mexico’s congressional rural affairs research center carried out a very comprehensive “meta-evaluation” of agricultural programs, which identified many of their constraints (CEDRSSA 2007c).⁵⁶ Nevertheless, there is little evidence that congress took the results into account. The World Bank has recently added a major contribution to the evaluation literature with an overview of Mexican broad public spending trends in agriculture and rural development, recently published online in both Spanish and English (World Bank 2009b).⁵⁷

In 2007, the National Evaluation Council (CONEVAL) led a process that compared program goals to operational design.⁵⁸ CONEVAL also contributes to addressing a “quality control” gap in the official evaluation policy, though much of its mandate is circumscribed to social programs, which leaves out agriculture. In 2008, the public interest group Gestión Social y Cooperación (GESOC) carried out a comprehensive independent assessment of the design of 104 federal programs, generating a comprehensive and accessible ranking.⁵⁹ According to GESOC’s director:

⁵⁵ See Scott, this volume and Palmer-Rubin, this volume. For a review of this evaluation experience, see Sagarpa/CEPAL/FAO (2008).

⁵⁶ Rindermann, Cruz, De Dios Trujillo and Ferman (2007) reach similar conclusions.

⁵⁷ See www.worldbank.org/mexico, under “economic and sector reports”

⁵⁸ See coneval.gob.mx

⁵⁹ See <http://www.gesoc.org.mx/icadi/>

“Given the lack of interest that the federal government and the congress have to encourage comprehensive and transparent approaches to the use of the information, GESOC has taken on the role of metaevaluation of the performance evaluation policy (PED), from a civil society position – providing an independent and systematic analysis of the results of the external evaluations of programs, as well as the conditions in which they were carried out between 2007 and 2009... [these tools and rankings] permit the detection of strengths, as well as specific problem areas that require attention to improve the programs’ design and performance.”⁶⁰

GESOC’s assessment of Procampo’s evaluations during 2007-2009 gave the program a slightly above average ranking for the quality of its program design:

“[receiving]...a rating of 6.9 out of 10 (45th out of 104 ranked). Procampo came out ahead with ratings of 7.6 y 7.8 in the indicators for *strategic alignment and operation*, but received only 4.5 in *orientation to results and the citizenry*. This indicates that Procampo does address a highly relevant public problem (low productive capacity and poverty among rural producers), and its operations are considered to function reasonably in the delivery of benefits, but its rationale for identifying its beneficiaries is incorrect. Procampo is based on an allocation of resources based on their amount of land, and not on the specific needs of the target population, which generates a *regressive* logic in that its benefits end up disproportionately favoring those who have more hectares in production and those who have higher incomes.” (emphasis in original).

The Direct Producer Support Program (Ingreso Objetivo) was ranked 5.7 in the ICADI study (71th place out of 104), with a ranking of 5.9 and 6.3 in the indicators for *strategic alignment and operation* and 4.5 in *orientation to results and the citizenry*. These rankings are due to the lack of clarity in the definition of the program’s target population, the lack of medium and long term planning instruments to assure the program’s consistency, as well as the weak logic of the linkages between this program and Procampo, in terms of the results that they seek.

The two programs share similar strengths and weaknesses: operational capacity but little capacity to resolve the public problem that they were created to address: to deal with the growing levels of inequity and poverty among rural producers.”⁶¹

So far, Mexico’s official evaluations in agriculture have had limited impact on the policy process. This substantial body of research constitutes an untapped resource for informing public debate over agricultural policy.

BIBLIOGRAPHY

- Adato, Michelle and John Hoddinott (eds.) (2010). *Conditional Cash Transfers in Latin America*, Baltimore: John Hopkins University Press, forthcoming.
- Almada Mireles, Hugo (2007) “La compra y coacción del voto: Una experiencia ciudadana,” presented at: “Candados y derechos: Protección de programas sociales y construcción de ciudadanía,” Mexico City, United Nations Development Program, April. <http://www.seminarioprotecciondeprogramas.org.mx/>
- Aparicio, Ricardo and David Corrochano (2005). “El perfil del votante clientelar en México durante las elecciones de 2000,” *Estudios Sociológicos*, 12(68). <http://redalyc.uaemex.mx>
- Appendini, Kirsten (1992). *De la milpa a los tortibonos: La reestructuración de la política alimentaria en México*. Mexico City: Colegio de México.
- Appendini, Kirsten, Raúl García Barrio and Beatriz De la Tijera Hernández (2008). “Seguridad alimentaria y “calidad” de los alimentos: ¿una estrategia campesina?,” in Raúl García Barrios, Beatriz De La Tijera Hernández and Kirsten Appendini (eds.) *Instituciones y desarrollo: Ensayos sobre la complejidad del campo mexicano*, México: UNAM. UACH/ Colegio de México. pp. 105-132.
- Appendini, Kirsten, Lorena Cortés and Valdemar Díaz Hinojosa (2008). “Estrategias de seguridad alimentaria en los hogares campesinos: La importancia de la calidad del maíz y la tortilla,” in Kirsten Appendini and Gabriela Torres-Mazuera (eds.) *¿Ruralidad sin agricultura?* Mexico: El Colegio de Mexico, pp. 103-128.
- Arslan, Aslihan and J. Edwards Taylor (2009). “Farmers’ Subjective Valuation of Subsistence Crops: The Case of Traditional Maize in Mexico,” *American Journal of Agricultural Economics*, 91(4). pp. 956-972.

⁶⁰ See González Arreola (2010)

⁶¹ *ibid*

- Arvizu, Juan (2010). "Mayorga: 'Ni por ética dejo de recibir mi subvención'," *El Universal*. February 18, http://www.eluniversal.com.mx/graficos/especial/EU_procampo/mayorga.html
- ASERCA (Apoyos y Servicios a la Comercialización Agropecuaria) (2006). "Programa de apoyos directos al productor por excedentes de comercialización para reconversión productiva integración de cadenas agroalimentarias y atención a factores críticos," Mexico City: ASERCA
- ASERCA (Apoyos y Servicios a la Comercialización Agropecuaria) (2008). "Avance de apoyos entregados por transferencia electrónica, al 14 de agosto de 2008," Mexico City: ASERCA, Coordinación General de Comercialización, Dirección de Pagos a la Comercialización.
- ASF (Auditoría Superior de la Federación) (2006). "Informe del resultado de la revisión y fiscalización superior de la Cuenta Pública," Sector Defensa Nacional, Sector Agricultura, Ganadería, Desarrollo Rural, Pesca, Alimentación. Tomo IV, Vol. I. <http://www.incosai2007.org.mx/ASF/ir2006i/Indice/Auditorias.htm>
- ASF (Auditoría Superior de la Federación) (2008) "Informe del resultado de la revisión y fiscalización superior de la Cuenta Pública," Sector Defensa Nacional, Sector Agricultura, Ganadería, Desarrollo Rural, Pesca, Alimentación. Tomo IV, Vol. I. <http://www.asf.gob.mx/trans/informes/IR2008i/Indice/sectoriales.htm>
- Austin, James and Gustavo Esteva (eds.) (1987). *Food Policy in Mexico*, Ithaca: Cornell.
- Ávila, José Antonio. Alicia Puyana and José Romero (eds.) (2008). *Presente y futuro del sector agrícola mexicano en el contexto de TLCAN*. Mexico City: El Colegio de México/ Universidad Autónoma Chapingo.
- Ávila, Sara, Carlos Muñoz, Luis Jaramillo and Adán Martínez (2005). "Un análisis del subsidio a la tarifa 09," *Gaceta Ecológica*, April -June, No. 075. Mexico: Instituto Nacional de Ecología. pp. 65-76. <http://redalyc.uaemex.mx>
- Barkin, David and Blanca Suárez San Román (1982). *El fin del principio: las semillas y la autosuficiencia alimentaria*, Mexico City: Editorial Océano.
- Barkin, David (2006). "Building a Future for Rural Mexico," *Latin American Perspectives*, 33(2). pp. 132-140.
- Bartra, Armando (1994). "On Subsidies and Self-Management: Lessons from Provisioning Experiments on the Guerrero Coast," in Cynthia Hewitt de Alcántara (ed.) *Economic Restructuring and Rural Subsistence in Mexico: Corn and the Crisis of the 1980s*. La Jolla, Ca: University of California, San Diego, Center for U.S.- Mexican Studies. pp. 131-144. <http://escholarship.org/uc/item/3v3166pn>
- Bartra, Armando. Rosario Cobo and Plutarco Emilio García (eds.) (2003). "¡El campo no aguanta más!," *Cuadernos Agrarios*, Número especial.
- Boltvinik, Julio and Araceli Damián (2003). "Derechos humanos y medición oficial de la pobreza en México," *Papeles de Población*, No. 35, January-March. pp.101-137. <http://redalyc.uaemex.mx>
- CEC (2004). *Maize and Biodiversity: the Effects of Transgenic Maize in Mexico*, Montreal: Commission on Environmental Cooperation Secretariat Report. www.cec.org/maize
- CEDRSSA (Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria) (2004a). "Algunos aspectos sobre la reestructuración de ASERCA," Palacio Legislativo de San Lázaro. December 16. www.cedrssa.gob.mx/
- (2004b). "Nota técnica: comentarios sobre una posible reestructuración de ASERCA," Mexico: Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria/ DEPPR/ INT/ 005/05, December 16. www.cedrssa.gob.mx/
- (2007a). "Análisis en materia rural de la revisión de la cuenta pública." Mexico City: Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria, www.cedrssa.gob.mx/
- (2007b). "Indicadores de mercado de maíz: una visión desde el lado de la oferta," November. Mexico City, Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria, Dirección de Evaluación de Políticas Públicas Rurales. www.cedrssa.gob.mx/
- (2007c). *Metaevaluación de programas de la Sagarpa, Dirigidos a productos agrícolas básicos. Resultados generales*, Mexico City, Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria, www.cedrssa.gob.mx
- CEPAL (1982). *Economía campesina y agricultura empresarial: Tipología de productores del agro mexicano*, Mexico: Siglo XXI
- Comunicación Social, Cámara de Senadores (2009). "Versión estenográfica de la comparecencia del titular de SAGARPA en el Senado. Miércoles, 30 de septiembre de 2009." www.comunicacion.senado.gob.mx
- CONAGO (Conferencia Nacional de Gobernadores) (2008). "Declaratoria de la XXXV reunión ordinaria de la conferencia nacional de gobernadores," Álamos, Sonora, September 26. <http://www.conago.org.mx/reuniones/FB-2008-09-26.aspx>
- CONASUPO (1989). "CONASUPO en Cifras," Mexico City: Compañía Nacional de Subsistencias Populares
- CONEVAL (2009a). "Evolución de la pobreza en México," Mexico City: Consejo Nacional de Evaluación de la Política de Desarrollo Social, www.coneval.gob.mx
- CONEVAL (2009b). "Reporta CONEVAL cifras de pobreza por ingresos 2008." Comunicado de Prensa. No. 006/09. Mexico City: Consejo Nacional de Evaluación de la Política de Desarrollo Social, July 18, www.coneval.gob.mx

- CONOC (Consejo Nacional de Organizaciones Campesinas) (2009a). "Nuestro posicionamiento con respecto al debate sobre el Procampo." www.conoc.org.mx
- (2009b). "El campo sí tiene futuro. *Urge* no sólo una reforma del PROCAMPO sino la reorientación de toda la política agroalimentaria y rural." July 30. <http://conoc.org.mx/>
- Contreras Castillo, José María and Janeth Magdalena Gómez Uribe (2009). "Reformas comerciales y cambios en el precio al productor de maíz en México," *Perfiles Latinoamericanos*, Vol. 33, January-June.
- Cerón, Hazel Monroy (2008). "El programa de apoyos directos al campo (PROCAMPO) y la reconversión de cultivos básicos en México. Un modelo de sobrevivencia," Mexico City: El Colegio de México, Masters' thesis in Economics.
- Cornelius, Wayne A. and Philip L. Martin (1993). "The Uncertain Connection: Free Trade and Rural Mexican Migration to the United States," *International Migration Review*, 27(3), Autumn. pp. 484-512.
- Cornelius, Wayne A. and David Myhre (eds.) (1998). *The Transformation of Rural Mexico*. La Jolla, CA: University of California, San Diego, Center for US-Mexican Studies.
- Cortés Vázquez, Lorena and José Valdemar Díaz Hinojosa (2005) "La seguridad alimentaria y la producción de maíz en un entorno de mercado y políticas de estado: un estudio de caso," *Estudios Agrarios*, No. 29. pp. 105-182.
- Cuecuecha, Alfredo and John Scott (2010). "The Effects of Agricultural Subsidies on Migration and Agricultural Employment," *Mexican Rural Development Research Reports*, No. 3, Woodrow Wilson International Center for Scholars, Mexico Institute. www.wilsoncenter.org/DesarrolloRuralMexicano
- De Ita, Ana (2003). "Los impactos socioeconómicos y ambientales de la liberalización comercial de los granos básicos en el contexto de TLCAN: El caso de Sinaloa," presented at the second North American Symposium on Assessing the Environmental Effects of Trade, Commission on Environmental Cooperation. Center for Environmental Cooperation, Montreal. www.cec.org
- De Ita, Ana (2008). "Fourteen Years of NAFTA and the Tortilla Crisis," *Americas Policy Program Special Report*, January 10. <http://americas.irc-online.org/am/4879>
- De Janvry, Alain, Marcel Fafchamps and Elisabeth Sadoulet (1991). "Peasant Household Behavior with Missing Markets: Some Paradoxes Explained," *Economic Journal*, 101, Nov., pp. 1400-17.
- De Janvry, Alain, Gustavo Gordillo and Elisabeth Sadoulet (1997). *Mexico's Second Agrarian Reform: Household and Community Responses*, La Jolla: University of California, San Diego, Center for US-Mexican Studies.
- De Janvry, Alain, Elisabeth Sadoulet and Gustavo Gordillo de Anda (1995). "NAFTA and Mexico's Maize Producers," *World Development*, 23(8). pp. 1329-1362.
- Díaz Cayeros, Alberto (2009). "Proteger Oportunidades," *El Universal*, Nov. 12, <http://www.eluniversal.com.mx/editoriales/46290.html>
- Díaz Hinojosa, Valdemar (2008). "Valor económico de la seguridad alimentaria del maíz en unidades domésticas productoras del centro de México," in Kirsten Appendini and Gabriela Torres-Mazuera (eds.) *¿Ruralidad sin agricultura?* Mexico: El Colegio de México, pp. 129-149.
- Dyer, George and Antonio Yúnez-Naude (2003). "NAFTA and Conservation of Maize Diversity in Mexico," The Second North American Symposium on Assessing the Environmental Effects of Trade. May 29.
- Dyer, George A. Steve Boucher and J. Edwards Taylor (2006). "Subsistence Response to Market Shocks," *American Journal of Agricultural Economics*, 88(2). pp. 279- 291.
- Echánove, Flavia and Cristina Steffen (2003). "Coping with Trade Liberalization: The Case of Mexican Grain," *Culture and Agriculture*, 25(2). pp.1-12.
- Echánove, Flavia (2009). "Políticas públicas y maíz en México: el esquema de agricultura por contrato," *Anales de Geografía*, 29(2). pp. 65-83
- El Semanario (2010). "Cargill de México niega ser beneficiario de Procampo," *El Semanario*. (unsigned) February 18. http://www.elsemanario.com.mx/news/news_display.php?story_id=33010
- Esteva, Gustavo and Catherine Marielle (eds.) (2003). *Sin maíz no hay país*, México City: CONACULTA (Consejo Nacional para la Cultura y las Artes) Dirección General de Culturas Populares e Indígenas.
- Esquivel, Gerardo (2009). "El mercado laboral rural en México: Caracterización y agenda de investigación," Mexico, DF: CEPAL. LC/MEX/L.894, January 30.
- Fiess, Norbert and Daniel Lederman (2004). "Mexican Corn: The Effects of NAFTA," *Trade Note*, 18. World Bank, International Trade Department. September 24. www.worldbank.org
- Figueroa Sandoval, Benjamín (2008). "Evaluación de PROCAMPO: Una perspectiva territorial." Washington, DC: Inter-American Development Bank, February 29.
- Fiszbein, Ariel and Norbert Schady, with Francisco Ferreira, Margaret Grosh, Nia Kellher, Pedro Olinto and Emmanuél Skoufias (2009). *Conditional Cash Transfers: Reducing Present and Future Poverty*. Washington, D.C.: World Bank. www.worldbank.org
- Fox, Jonathan (1992). *The Politics of Food in Mexico: State Power and Social Mobilization*. Ithaca: Cornell University Press. www.books.google.com
- (1994). "Political Change in Mexico's New Peasant Economy," in Maria Lorena Cook, Kevin J. Middlebrook and Juan Molinar, (eds.). *The Politics of Economic Restruc-*

- turing: *State-Society Relations and Regime Change in Mexico*. La Jolla: UCSD, Center for U.S.- Mexican Studies. <http://escholarship.org/uc/item/84t497rz>
- (1995). "Governance and Development in Rural Mexico: State Intervention and Public Accountability," *Journal of Development Studies*, 32(1). October. <http://escholarship.org/uc/item/5x30d611>
- (2003). "De la teoría a la práctica del capital social: Banco Mundial en el campo mexicano," *Foro Internacional*, 43(2), April-June. pp. 347-402. <http://escholarship.org/uc/item/58c747g9>
- (2007a). *Accountability Politics: Power and Voice in Rural Mexico*. Oxford: Oxford University Press.
- (2007b). "The Uncertain Relationship between Transparency and Accountability," *Development in Practice*, 17(4-5). August. <http://escholarship.org/uc/item/8c25c3z4>
- Fox, Jonathan and Libby Haight (2009). "El condicionamiento político del acceso a programas sociales en México," in David Álvarez-Gómez (ed.) *Candados y contrapesos: La protección de los programas, políticas y derechos sociales en México y América Latina*. Guadalajara: Instituto Tecnológico y de Estudios Superiores de Occidente/ United Nations Development Program. <http://escholarship.org/uc/item/419890fx>
- García Barrios, Raúl, Beatriz de la Tijera Hernández and Kristen Appendini. (eds.) (2008). *Instituciones y desarrollo: ensayos sobre la complejidad del campo mexicano*. Mexico, DF: UNAM/Colegio de México/ Universidad Autónoma Chapingo.
- García Raño, Hugo and Alder Keleman (2007). "La crisis de maíz y la tortilla en México: ¿modelo o coyuntura?," Oxfam International. November.
- García-Salazar, José (2001). "Efecto de PROCAMPO sobre la producción y saldo de comercio exterior de maíz," *Agrociencia*, 35(006). pp. 671-683. <http://redalyc.uaemex.mx/>
- GEA (2006). "Estudio sobre la evaluación del desempeño del programa de apoyos directos al campo (Procampo): año agrícola 2006. Informe final," Mexico City: Grupo de Economistas y Asociados, Mexico, D.F. November 24
- Golden, Tim (1991). "The Dream of Land Dies Hard in Mexico," *New York Times*. Nov. 27
- Gómez Oliver, Luis (2007). "Análisis integral de gasto público agropecuario en México," Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. Organización de las Naciones Unidas para la Agricultura y la Alimentación. <http://www.fao-evaluacion.org.mx/pagina/sector-agroalimentario>
- (2008). "El gasto público rural más allá de transferencias y subsidios," Food and Agriculture Organization, October. <http://www.cedrssa.gob.mx/?doc=1652>
- González Arreola, Alejandro (2010). "Programas de subsidio al campo mexicano a la luz de los resultados de las evaluaciones oficiales: entre la regresividad y las limitaciones del sistema público de evaluaciones" *Mexican Rural Development Research Report*, No. 10, Woodrow Wilson International Center for Scholars, Mexico Institute. www.wilsoncenter.org/DesarrolloRuralMexicano.
- González, G. Susana (2009). "La tonelada de maíz se encareció 13% en dos meses por retiro de subsidios," *La Jornada*, Sept. 28, p. 21. www.jornada.unam.mx.
- González-Konig, Gabriel and Quentin Wodon (2005). "Do Cash Transfers to Farmers Reduce Migration? Procampo in Mexico," No. EC200501, *Department of Economics and Finance Working Papers*, Universidad de Guanajuato. <http://econpapers.repec.org/paper/guawpaper/ec200501.htm>
- Gordillo, Gustavo (1988a). *Campesinos al asalto del cielo, de la expropiación estatal a la apropiación campesina*. Mexico City: Siglo XXI
- (1988b). *Estado, mercados y movimiento campesino*. Mexico City: Plaza y Valdés/UAZ.
- (1990). "La inserción de la comunidad rural en la sociedad global: Hacia un nuevo modelo de desarrollo para el campo," *Comercio Exterior*, 40(9). September.
- (2009). "Sesgos y ausencias en la política rural," *El Universal*. July 30. <http://www.eluniversal.com.mx/editoriales/45063.html>
- Grindle, Merilee (1977). *Bureaucrats, Peasants and Politicians in Mexico*. Berkeley: University of California Press.
- Grupo Interagencial de Desarrollo Rural (2009). "México: Evaluación de políticas rurales. Tendencias teóricas y lecciones de la experiencia," Mexico: CEPAL, FAO, IICA, March 25.
- Guerra Ford, Oscar et al (2005a). "Evaluación externa del ejercicio fiscal 2004 del programa de abasto rural a cargo de Diconsa S.A. de C.V.: Documento Informe Final," Mexico City: Colegio Nacional de Economistas, A.C. March. www.diconsa.gob.mx
- (2005b). "Informe Final (Alcance): Evaluación externa del ejercicio fiscal 2005 del programa de abasto rural a cargo de Diconsa S.A. de C.V.," Mexico City: Colegio Nacional de Economistas, October. www.diconsa.gob.mx
- Haight, Libby (2006). "Documento de Trabajo para la Tercera Reunión Nacional de los Consejos Comunitarios de Abasto, A.C.: Resultados preliminares del proyecto de investigación," Working paper, unpublished, March.
- Henriques, Giselle and Raj Patel (2004). "NAFTA, Corn, and Mexico's Agricultural Trade Liberalization," *IRC Americas Program Special Report*, February 13. <http://www.cipamericas.org/archives/1009>
- Hernández, Evangelina (2010). "Cosechan beneficios desiguales en el campo," *El Universal*. February 15. http://www.eluniversal.com.mx/graficos/especial/EU_procampo/procampo.html

- Hernández Navarro, Luis (2007). "Cargill 'El maíz de sus tortillas,'" *La Jornada*. January 30. www.jornada.unam.mx
- Hewitt de Alcántara, Cynthia (1976). *Modernizing Mexican Agriculture: Socioeconomic Implications of Technological Change*. Geneva: United Nations Research Institute for Social Development.
- (ed.) (1994). *Economic Restructuring and Rural Subsistence in Mexico: Corn and the Crisis of the 1980s*. UC San Diego: Center for U.S. -Mexican Studies. <http://escholarship.org/uc/item/3v3166pn>
- (2007). "Ensayo sobre los obstáculos al desarrollo rural en México: Retrospectiva y prospectiva," *Desacatos*, No. 25, September-December. pp. 79-100. <http://www.ciesas.edu.mx/desacatos/ini.html>
- Hinojosa-Ojeda, Raul and Sherman Robinson (1992). "Labor Issues in North American Free Trade," in Nora Lustig, Barry P. Bosworth, Robert Z. Lawrence. (eds.) *North American Free Trade: Assessing the Impact*. Washington, DC: The Brookings Institution
- IDB (Inter-American Development Bank) (2006). "Programa de apoyo a Procampo," Washington, D.C.: IDB. Project No: ME0213, Loan:1334/OC-ME.
- (2009). "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)." Washington, D.C.: IDB, www.iadb.org
- IDB (Inter-American Development Bank)/SAGARPA (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación) (2007). "Diagnóstico y propuestas de reforma del programa de apoyos directos al campo (PROCAMPO)," February.
- Jiménez García, Eligio, Miguel Damián and Antonio Cruz (2008). "Política de precios de garantía contra apoyos directos: Análisis del bienestar del productor," *Revista Fitotecnia Mexicana*, 31(004). October- December. Pp. 382-389. <http://redalyc.uaemex.mx/>
- Juárez Sánchez, José Pedro and Benito Ramírez Valverde (2006). "El programa de subsidios directos a la agricultura (PROCAMPO) y el incremento en la producción de maíz en una región campesina de México," *Ra Ximhai*, 2(2). May-August pp. 373-391. <http://redalyc.uaemex.mx/>
- Kato, Takeo. Cristina Mapes Sánchez, Luz María Mera Ovando, José Antonio Serrato Hernández and Robert Bye Boettler (2009). *Origen y diversificación del maíz: Una revisión analítica*, México, DF: CONABIO. <http://www.biodiversidad.gob.mx/genes/origenDiv.html>
- Keleman, Alder, Hugo García Raño and Jon Hellin (2009). "Maize Diversity, Poverty and Market Access: Lessons from Mexico," *Development in Practice*, 19(2). April.
- Keys, Eric (2005). "Exploring Market- Based Development: Market Intermediaries and Farmers in Calakmul, Mexico," *Geographical Review*, 95(1). pp. 24-46.
- Keys, Eric and Rinku Roy Chowdhury (2006). "Cash Crops, Smallholder Decision- Making and Institutional Interactions in a Closing-Frontier: Calakmul, Campeche, Mexico," *Journal of Latin American Geography*, 5(2). pp. 75-90.
- Klepeis, Peter and Colin Vance (2003). "Neoliberal Policy and Deforestation in Southeastern Mexico: An Assessment of the PROCAMPO Program," *Economic Geography*, 79(3) July. pp. 221-240.
- Lasala Blanco, Nayarani (2003). "Las negociaciones del maíz en el Tratado de Libre Comercio de América del Norte," Tesis (Licenciatura en Relaciones Internacionales), El Colegio de México, México.
- Levy, Santiago and Sweder van Wijnbergen (1992). "Maize and the Free Trade Agreement between Mexico and the United States," *World Bank Economic Review*, 6(3). pp. 481-502.
- Levy, Santiago and Evelyn Rodriguez (2005). *Sin herencia de pobreza: El Programa Progresión-Oportunidades en México*, Washington, Inter-American Development Bank.
- Lloyd, Marion (2009). "Mexico Allows Experimental GM- Corn Plots," *Ecoamericas*, October.
- López Presa, José Octavio (2002). *La rendición de cuentas en la política social*. México, DF: Auditoría Superior de la Federación, Serie Cultura de la Rendición de Cuentas. Marzo. www.asf.gob.mx
- Loyns, R.M.A. Karl Meilke. Ronald D. Knutson and Antonio Yúnez-Naude. (eds.) (2001). *Trade Liberalization under NAFTA: Report Card on Agriculture*. Proceedings of the Sixth Agricultural and Food Policy Systems Information Workshop. Winnipeg, Canada: Friesen Printers, Texas A&M University, University of Guelph, El Colegio de México. <http://pdic.tamu.edu/yellow.htm>
- Luna Flores, Maximino (2004). "¿Por qué no se deja producir el maíz en México?," in Rita Schwentesius. Manuel Ángel Gómez, José Luis Calva Téllez and Luis Hernández Navarro (eds.) *¿El campo no aguanta más?* Chapingo: Universidad Autónoma Chapingo, 2ª Edición. Pp. 111-128.
- Martin, Philip (1993). *Trade and Migration: NAFTA and Agriculture*. Washington DC: Institute for International Economics.
- Massieu Trigo, Yolanda (2009) "Cultivos y alimentos transgénicos en México: el debate, los actores y las fuerzas sociopolíticas," *Argumentos*, Nueva época, January-April, 22(59) Pp.217-246 <http://redalyc.uaemex.mx/>
- Maxfield, Sylvia and Adam Shapiro (1998). "Assessing the NAFTA Negotiations: U.S.- Mexican Debate and Compromise on Tariff and Non-Tariff Issues," in Carol Wise (ed.) *The Post-NAFTA Political Economy: Mexico and the Western Hemisphere*, University Park: Penn State

- University. pp. 82-118
- McAfee, Kathleen (2008). "Beyond Technoscience: Transgenic Maize in the Fight over Mexico's Future," *Geoforum*, 39(1). pp. 148-160
- Mitchell, Kenneth Edward (2001). *State-Society Relations in Mexico: Clientelism, Neoliberal State Reform, and the Case of Conasupo*. Surrey, UK: Ashgate
- Merlos, Andrea, Manuel Arteaga and Juan Arvizu (2009). "Los diputados ceden a presión de campesinos: Logran reasignación al sector agrícola por 22 mil 600 mdp," *El Universal*, Nov. 16. <http://www.eluniversal.com.mx/nacion/172986.html>
- Nadal, Alejandro (1999). "Issue Study 1. Maize in Mexico: Some Environmental Implications of the North American Free Trade Agreement (NAFTA)," *Assessing Environmental Effects of the North American Free Trade Agreement (NAFTA)*. Montreal: Commission for Environmental Cooperation. www.cec.org
- Nadal, Alejandro and Timothy A. Wise (2004). "The Environmental Costs of Agricultural Trade Liberalization of Mexico-U.S. Maize Trade Under NAFTA," *Discussion Paper*, No. 4, Working Group on Development and Environment in the Americas.
- Núñez Rodríguez, Violeta (2009). "Análisis de presupuesto en materia indígena, 2001-2009." Mexico City: CEDRSSA, Dirección de Estudios sobre la Soberanía Alimentaria y la Nueva Ruralidad. April 2.
- Ochoa, Enrique C. (2000). *Feeding Mexico: The Political Uses of Food since 1910*. Wilmington, Delaware: Scholarly Resources.
- OECD (2006). *Agricultural and Fisheries Policies in Mexico: Recent Achievements, Continuing the Reform Agenda*. Paris: Organization for Economic Cooperation and Development.
- Paré, Luisa (1977). *El proletariado agrícola en México*. Mexico: Siglo XXI.
- Passel, Jeffrey S. and Roberto Suro (2005). "Rise, Peak and Decline: Trends in U.S. Immigration 1992-1994," *Pew Hispanic Center Report*, September 27. www.pewhispanic.org
- Patrón Guerra, Fernando and Jesús Fuentes Navarro (1982). "Acciones y coordinación FIRA en relación con el Sistema Alimentario Mexicano," presented at COPIDER-Harvard Workshop, Mexico City: CIESS, October.
- Peña Garza, Samuel (2009). "La noción ambiental en PROCAMPO," *Agenda Rural*, 1(2), August 27. pp. 6. www.cedrssa.gob.mx
- Pérez, Matilde (2009a). "Busca la CNC que el agro reciba \$272 mil millones y federalización del gasto en 2010," *La Jornada*, October 19. www.jornada.unam.mx
- (2009b). "Difieren organizaciones del campo sobre la aplicación del presupuesto para 2010," *La Jornada*, November 23. www.jornada.unam.mx
- Piñeyro-Nelson, A. Van Heerwaarden. H.R. Perales. J.A. Serratos-Hernández. A. Rangel. M.B. Hufford. P. Gepts. A. Garay-Arroyo. R. Rivera-Bustamante and E. R. Álvarez-Buylla (2008). "Transgenes in Mexican Maize: Molecular Evidence and Methodological Considerations for GMO Detection in Landrace Populations," *Molecular Ecology*, 18(4), February. pp. 750-61
- PNUD (2007). *Encuesta nacional sobre la protección de los programas sociales ENAPP 2006*. México, DF: Programa de las Nacionales Unidas para el Desarrollo.
- Puyana, Alicia and José Romero (2008a). *Diez años con el TLC: Las experiencias del sector agropecuario mexicano*. México, DF. Colegio de México/FLACSO.
- (eds.) (2008b) *El sector agropecuario y el Tratado de Libre Comercio de American del Norte: Efectos económicos y sociales*, Mexico: El Colegio de México.
- Ramírez, Jaime Peña (2004). "El maíz itinerante," XXIV Seminario de Economía Agrícola. FES Acatlán. October.
- Ramírez, Erika (2009). "El erario, al servicio del las transnacionales del campo," *Contralinea*, November 22. <http://contralinea.info/archivo-revista/index.php/2009/11/22/el-erario-al-servicio-de-las-trasnacionales-del-campo/>.
- Randall, Laura (ed.) (1996). *Reforming Mexico's Agrarian Reform*. Armonk, NY: M.E. Sharpe.
- Rascon, Fernando, Claudia Hernández and Julieta Salazar (2006). "Tipología de productores," in CEDRSSA. *Escenario y actores en el medio rural*, Mexico City: Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria. pp. 119-152 www.cedrssa.gob.mx
- Reyes Guzmán, Gerardo, Jimena Guerra Navarro and Gilberto Calderón Ponce (2005). "Condiciones de cultivo del maíz criollo en comunidades de Puebla, Tlaxcala e Hidalgo: Un análisis de las economías de autoconsumo," *Aportes*, 10(29), August. pp. 63-82. <http://redalyc.uaemex.mx/>
- Rindermann, Rita. Manuel Cruz, Juan De Dios Trujillo and Pedro Ferman (2007). "Metaevaluación de tres evaluaciones oficiales de SAGARPA del Programa de Pagos Directos (PROCAMPO) a la agricultura mexicana," *Estudios Sociales*, 15(30), July-December. pp. 103-134. <http://redalyc.uaemex.mx/>
- Rivera, Juan, Scott Whiteford and Manuel Chavez (eds.) (2009). *NAFTA and the Campesinos: The Impact of NAFTA on Small-Scale Agricultural Producers and the Prospects for Change*. Scranton, PA: University of Scranton Press.
- Robinson, Sherman, Mary Burfisher, Raul Hinojosa-Ojeda and Karen Thiefelder (1991). "Agricultural Policies and Migration in a United States-Mexico Free Trade Area: A Computable General Equilibrium Analysis," Department of Agricultural and Resource Economics, *Working Paper* 617. University of California, Berkeley.
- Robles Berlanga, Héctor Manuel (2009). "Apuntes sobre el ejercicio del presupuesto 2007 para el sector rural," Mexico City: Centro de Estudios para el Desarrollo Rural Sustentable

- y la Soberanía Alimentaria/ DESANR/ INV/ 009/09. No. 7. April.
- (2010a). "Ejercicio del Presupuesto 2007 para el sector rural. Principales Programas Sagarpa," *Mexican Rural Development Research Report*, No. 8, Woodrow Wilson International Center for Scholars, Mexico Institute. www.wilsoncenter.org/DesarrolloRuralMexicano
- (2010b) "Ejercicio del presupuesto 2007 para el sector rural con base a la presencia de la población indígena," *Mexican Rural Development Research Report*, No. 9, Woodrow Wilson International Center for Scholars, Mexico Institute. www.wilsoncenter.org/DesarrolloRuralMexicano
- Rodríguez Maldonado, Jubenal and Victor Suárez Carrera (1998). "La agricultura de granos básicos en México a tres años TLC: Una oportunidad para rectificar," in Rita Schwentesius Rindermann, Manuel Ángel Gómez Cruz and Gary Williams (eds.) *¿TLC y agricultura: funciona el experimento?* México: Universidad Autónoma Chapingo/CIESTAAM/Ed. Juan Pablos. pp. 245-268.
- Rosenzweig, Andrés (2003). "Changes in Mexican Agricultural Policies, 2001-2003," Paper presented at the Ninth Agricultural and Food Policy Information Workshop, Montreal Quebec, March 23-26.
- Sadoulet, Elisabeth, Alain De Janvry and Benjamin Davis (2001). "Cash Transfer Programs with Income Multipliers: PROCAMPO in Mexico," *World Development*, 29(6) pp. 1043-1056.
- SAGARPA (1996). "Normas de operación del ciclo otoño-invierno 95-96 del Procampo." Mexico City: Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. January 5.
- (2006). "El comportamiento del ingreso rural en México 1994-2004," Mexico City: Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. April.
- SAGARPA/FAO (2007). "Análisis integral del gasto público agropecuario en México," Mexico City: Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación and Organización de las Naciones Unidas para la Agricultura y la Alimentación). October. <http://www.fao-evaluacion.org.mx/pagina/sector-agroalimentario>.
- Salcedo, Salomón. José García and Myriam Sagarnaga (1993). "Política agrícola y maíz en México: hacia el libre comercio norteamericano," *Comercio Exterior*, April. 43(4).
- Salinas Álvarez, Samuel (2006). *Demanda educativa de la población jornalera migrante: Estadísticas y conceptos*. México, DF: Secretaría de Educación Pública, Coordinación General De Educación Intercultural y Bilingüe.
- Sánchez, José and Benito Valverde (2006). "El programa de subsidios directos a la agricultura (PROCAMPO) y el incremento de la producción de maíz en una región campesina," *Ra Ximhai*. 2(2). pp. 373-391. Universidad Autónoma Indígena de México. <http://redalyc.uaemex.mx/>.
- Sánchez Albarrán, Armando (ed.) (2007). *El campo no aguanta más*. México: UAM Azcapotzalco/ Miguel Ángel Porrúa.
- SARH (1993). "PROCAMPO: Vamos al grano para progresar," Mexico: Secretaria de Agricultura y Recursos Hidráulicos.
- Sarukhán, José (2009). "Origen y diversificación del maíz," *La Jornada*. Oct. 2, www.jornada.unam.mx.
- Schmook, Bright and Colin Vance (2009). "Agricultural Policy, Market Barriers and Deforestation: The Case of Mexico's Southern Yucatán," *World Development*, 37(5). pp. 1015-1025.
- Shamah Levy, Teresa, Abelardo, Anila Curiel, Lucía Cuervas Nasu, Adolfo Chávez Villasana, Marco Antonio Ávila Arcos and Carlota Fernández Mendoza (2003). "El subsidio a la tortilla en México: ¿un programa nutricional o económico?," *Archivos Latinoamericanos de Nutrición*, 53(1). http://www.alanrevista.org/ediciones/2003-1/subsidio_tortilla_mexico.asp.
- SIAP (no date). "Situación actual y perspectivas del maíz en México, 1996-2012." www.cedresa.org.mx.
- Soto Romero, Jorge Mario (et al) (2004). "Evaluación de resultados del Programa Tortilla a cargo de Liconsa S.A. de C.V., Informe final del periodo enero-diciembre," Mexico: Centro de Estudios Estratégicos. March. www.sedesol.gob.mx
- Steffen Riedemann, Christina (2007). "La focalización de los subsidios a los granos en México," *Polis: Investigación y Análisis Sociopolítico y Psicosocial*, 3(2). pp. 69-103. <http://redalyc.uaemex.mx/>
- Suárez Carrera, Víctor (2005). *¿Tiene futuro la agricultura campesina en México? Políticas públicas para la soberanía alimentaria y el desarrollo rural con campesinos*. México, DF: Centro de Estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria.
- Sumner, Daniel A. and Joseph V. Balagtas (2007). "Economic Analysis of the Ingreso Objetivo Program in Mexico," Inter-American Development Bank. August 13, unpublished document.
- Taylor, J. Edward, Antonio Yúnez-Naude and Alfredo González (2007). "Informe Consolidado: Estudios sobre las Políticas Públicas para el Sector Rural en México," Proyecto del Banco Interamericano de Desarrollo para la Secretaría de Hacienda y Crédito Público, July 28, unpublished.
- Téllez Keunzler, Luis (1994). *La modernización del sector agropecuario y forestal*. México, DF: Fondo de Cultura Económica.
- Torres Rojo, Juan Manuel (2007). "Diagnóstico de la producción agrícola en el periodo de aplicación de Procampo," *Diagnóstico del Sector Agropecuario*, December 5.
- Uchitelle, Louis (2007). "Nafta Should Have Stopped Illegal Immigration, Right?," *New York*

Times, Feb 18, p. 4.

- Vásquez Robles, Héctor and Raúl García Barrios (2008). "Fallas estructurales del mercado de maíz y a la lógica de la producción campesina (microeconómica del autoabasto y la auto-suficiencia)," in Raúl García Barrios, Beatriz De la Tejera Hernández and Kristen Appendini (eds.) *Instituciones y desarrollo: Ensayos sobre la complejidad del campo mexicano*. Mexico: UNAM/UACH/ Colegio de Mexico. pp. 281-355.
- Von Bertrab, Alejandro (2004). "El efecto de la liberalización económica en los prequeños productores de maíz en México " *Comercio Exterior*. 66, November.
- Warman, Arturo (2003). *Corn and Capitalism: How a Botanical Bastard Grew to Global Dominance*. Chapel Hill: University of North Carolina Press.
- Winters, Paul and Benjamin Davis (2009). "Designing a Programme to Support Smallholder Agriculture in Mexico: Lessons from PROCAMPO and Oportunidades," *Development Policy Review*. 27(5), pp. 617-642.
- World Bank (1994). "Mexico Rainfed Areas Development Project," Washington, DC: World Bank Staff Appraisal Report No. 12533-ME, June 15.
- (2004). *Mexico Public Expenditure Review*, Colombia Mexico Country Management Unit Poverty Reduction and Economic Management Unit Latin America and the Caribbean Region August 10. Report No. 27894-MX. www.worldbank.org/mexico (under Economic and Sector Reports)
- (2009a). "Procampo Project, Concept Stage," Report No. AB4952, Public Information Document. July 24, www.worldbank.org/mexico.
- (2009b). *Mexico: Agriculture and Rural Development Public Expenditure Review*, Washington, DC: World Bank, Sustainable Development Department, Latin American and Caribbean Region, December, www.worldbank.org/mexico.
- World Bank/IMCO (Insituto Mexicano para la Competitividad) (2007). *Policy Notes Overview and Corn Market - Implications for Mexican Producers and Consumers*, Agriculture and Rural Development Team, Sustainable Development, Latin America and the Caribbean Region. Washington: World Bank, 'Integration of the North American Market for Sensitive Agricultural Commodities', December.
- Yúnez-Naude, Antonio (2002). "Mexico's Basic-Crops Subsector: Structure and Competition under Free Trade," Paper presented at Seventh Agricultural and Food Policy Systems Workshop, Tucson Arizona February 14-17. <http://ideas.repec.org/p/ags/ffaf01/16860.html>.
- (2003). "The Dismantling of CONASUPO, a Mexican State Trader in Agriculture," *The World Economy*. 26(1), pp. 97-122.
- (2007). "Políticas compensatorias para la agricultura familiar frente a los impactos de los TLC," Proyecto GCP/RLA/152/IAB. Mexico. April 11.
- Yúnez-Naude, Antonio and Fernando Barceinas Paredes (2003). "El TCLAN y la agricultura mexicana," XIX Seminario de Economía Mexicana. Instituto de Investigaciones Económicas, UNAM. July 14-18.
- (2004). "The Agriculture of Mexico After Ten Years of NAFTA Implementation," Banco Central de Chile: *Documentos de Trabajo*. No. 277, December. www.bcentral.cl/eng/studies/working-papers/pdf/dtbc277.pdf.
- Yúnez-Naude, Antonio and J. Edward Taylor (2006). "The Effects of NAFTA and Domestic Reforms in the Agriculture of Mexico: Predictions and Facts," *Region et Développement*, No. 23.
- Yúnez-Naude, Antonio, Susan M. Richter and J. Edward Taylor (2007). "Impacts of Policy Reforms on Labor Migration from Rural Mexico to the United States," in George J. Borjas (ed.) *Mexican Immigration to the United States*, National Bureau of Economic Research Conference Report: University of Chicago Press.
- Zahniser, Steven and William Coyle (2004). "U.S.- Mexico Corn Trade Turing the NAFTA Era: New Twists to an Old Story," Washington, D.C.: United States Department of Agriculture, Economic Research Services, May. www.ers.usda.gov