NAFTA AND REGIONAL AGRICULTURAL INTEGRATION: NORTH-WEST MEXICO AND CALIFORNIA

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I Introduction

Unilateral domestic farm policy reforms in the European Union and the United States provided the foundation for the 1992 bilateral Blair House accord, which effectively resolved the impasse in the agricultural trade negotiations of the Uruguay Round. The successful conclusion of these negotiations, with agreement on lower levels of Aggregate Measurement of Support (AMS) and tariffication, holds out the promise of further multilateral agricultural trade liberalization. However, for this promise to be fulfilled requires continued progress in tandem on both fronts. Several factors warn against excessive optimism in this regard. Specifically, the agricultural "super powers," the United Stated and European Union, have been slow to demonstrate the political will to undertake the progressive, root-and-branch dismantling of their domestic farm policies.1 This reluctance was overtly displayed in the complex end-game of the Uruguay Round and its modest concrete achievements, and in the discriminatory side-agreements appended to the NAFTA to appease sectoral commodity interest in the United States.

A second, more fundamental, impediment to continued agricultural trading liberalization is the growth of regionalism and preferential trading arrangements. There is an apparent paradox here in that agriculture, after decades of protectionist exemption, has become an integral part of regional and subregional free trade area (FTA) agreements and bilateral accords.

1 For further discussion, see McCalla (1993) and Swinbank (1993). Speaking in Ames, Iowa on 25 April, 1995, President Clinton promised to defend federal farm subsidies against Republican budgetary reforms and, noting the US $20 billion surplus in agricultural trade suggested that "our first rule should be: do no harm" (The New York Times, 26, April, 1995, p. A15).
Nevertheless, the emergence of powerful regional trade blocs is widely perceived as a potentially critical constraint on the future of liberal multilateralism.

Doubts about the complementarity of regionalism and multilateralism add to the uncertainty surrounding the geo-political configurations in which US-Mexico agricultural integration and its development will be situated. These future configurations will depend, for example, on the prospective expansion of NAFTA to create a Western Hemisphere Free Trade Area, and the nature of trade relations with the European Union, the Asia-Pacific Economic Cooperation (APEC) forum, and other regional groupings. Whether the world trading system fragments into inward-looking, protectionist continental regional blocs or evolves towards more open, less antagonistic inter-bloc relations will have significant implications for the future of the NAFTA and the sectoral policies and trade of member countries.

With this broader yet uncertain context, we begin by reviewing the processes and circumstances leading to the NAFTA agreement. The discussion provides background for the core sections of the paper: a case study of binational, interregional integration and adjustment in the horticultural sectors of North-West Mexico and California.

II. The Emergence of NAFTA and Mexican Liberalization

Despite widely-held views about the origins of the NAFTA, these are based largely on conjecture rather than serious analysis, arguably more so in the case of Mexico that the United States. One common perception is that the United States' favorable response to the proposal by President Salinas to begin the NAFTA negotiations, and its interest in regional FTAs more generally, formed part of a "twin track" approach to trade policy intended to maintain pressure for

\[2\] President Clinton currently is seeking congressional support to apply “fast track” provisions to US trade negotiations with new members of NAFTA.
a successful conclusion of the Uruguay Round. A related explanation places greater emphasis on the United States' growing disenchantment with multilateralism during the protracted Uruguay Round negotiations and the more certain benefits of regionalism. The Canada-United States FTA agreement of 1988, President Bush's 1990 Enterprise of the Americas Initiative, and the NAFTA also can be seen in the context of the European Community's Single Market proposal announced in 1985 and fears of possible US isolation between a "Fortress Europe" and protectionist trade rivals in East Asia. Tweeten (1993) gives a succinct statement of this rationale. "With only modest liberalization expected from multilateralism for a decade after the Uruguay Round, the alternatives to realize the large remaining gains from trade are unilateralism (such as revival of "super 301"), bilateralism (such as the voluntary export restraint agreements), and regionalism. One reason for the appeal of regionalism is the lack of promise in the alternatives" (810).

The protectionist bias of OECD trade policy since the 1970s, evident in the emphasis on unilateralism, market access and "managed trade," in conjunction with the perceived restructuring of the global trading system into regional blocs, has galvanized smaller countries to pursue bilateral agreements and establish subregional trading arrangements. The powerful "bandwagon" pressures on smaller countries for inclusion in FTAs have been widely noted (Hufbauer and Schott, 1994; Lawrence, 1994). In the case of Mexico, for example, the NAFTA promised secure access to the markets of its leading trading partner, irrespective of the outcome of multilateral negotiations, in the GATT.

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3 Tweeten (1993) casts the tensions in terms of multilateralism and unilateralism. "Increasingly, the United States has presented two contrasting faces of US trade policy. One promises seemingly solid support for the GATT... "The other face, with an aggressive and unilaterally defined set of trade policies tinged with protectionism, tends to dominate at home, with apparent disregard for the multilateral trading system"(243-44).
Such defensive strategic considerations undoubtedly carried weight in the Mexican decision to propose the NAFTA negotiations. Yet, in historical perspective, the NAFTA represents an acceleration and deepening of a long, continuing process of US-Mexico integration, as the later discussion of the binational horticultural sector amply demonstrates. The NAFTA initiative also must be set in the context of the neo-liberal policies and unilateral trade opening which the de la Madrid and Salinas administrations pursued with increasing zeal following the 1982 debt crisis. The NAFTA represents another milestone, albeit a significant one, in the recent history of Mexican liberalization. This process includes unilateral tariff reductions preceding Mexico's accession to the GATT in 1986, domestic deregulation and privatization, the conclusion of several trade and investment framework agreements with the US between 1985 and 1989, and the dismantling in October, 1993 of agricultural price supports. This radical redefinition of state-agriculture relations was symbolized earlier by the November, 1991 amendment of Article 27 of the Mexican constitution, bringing to a formal close the historical cycle of land redistribution (Fox, 1994).

A common rationale given for Mexico's initiation of the NAFTA in June, 1990 is that it "locked in" neo-liberal reforms, with the implication that this would enhance their sustainability (Fox, 1992; de Melo and Panagariya, 1992). This is true as far as it goes, but the real intent of Salinas' NAFTA announcement arguably was to send an unequivocal signal to international investors to attract the capital inflows needed to support the peso and restrain inflation through import competition (Lustig, 1992; Pastor, 1994). According to Pastor (1994),

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4 Early institutional expressions of this integration include the Reciprocal Trade Agreements Act of 1934, the 1942 Bracero Program, and the maquiladora in bond production scheme included in Mexico's Border Industrialization Program of 1965.

5 For a recent analysis of Mexico's commercial opening in the 1980's, see Pastor and Wise (1994).

6 The new policy, PROCAMPO, de-couples subsidies from production by phasing in new direct compensatory payments to farmers as subsidies via high producer prices are phased out. These reforms also marked a further departure from Mexico's long standing commitment to national food self-sufficiency, a step taken even before the ratification of the NAFTA agreement by the US Congress in November, 1993.
recognition of the macro-economic imperatives of Mexico's trade opening is central to "any political economy analysis of Mexico's initiation of NAFTA" (157). As a corollary, he urges that it is essential "to explain exactly what has occurred institutionally and politically that has allowed neoliberal policymakers to dominate the Mexican scene" (Ibid., 170).

Such analyses would make a vital contribution to an assessment of the sustainability of Mexico's reform process. This question already had come to the fore with the uprising in Chiapas and rural social unrest in many other regions, and the events surrounding the assassination of the PRI's presidential candidate, Luis Donaldo Colosio. Such an assessment has become even more critical now in the aftermath of the dramatic peso crisis of December, 1994, and President Zedillo's decision to implement strong stabilization measures without the support of a social pact (pacto). The gravity of the present crisis preempts meaningful discussion of the projections of the many computable general equilibrium models formulated during the debates on the NAFTA (USITC, 1992).

In agriculture, as in other sectors, trade flows monitored since ratification are now questionable indicators of likely short-term adjustments and trends in the immediate future (USDA/ERS, 1994). In these uncertain circumstances, it is appropriate simply to outline the terms of the NAFTA agreement on US-Mexico agricultural trade. Free agricultural trade will be reached within fifteen years following a staged process specified by four schedules of tariff reduction and quota liberalization. Schedule A involves immediate tariff elimination on products

7 On the issue of the macroeconomic sustainability of the Mexican reforms, Pastor (1994) recommends further research on trade liberalization which restricts "comparision to only those cases in which relatively fixed and overvalued exchange rates were a key feature" (170). In the light of the 1995 peso crisis, his remarks are prophetic: "By this benchmark, one might worry whether Mexico's quadrupling of imports since 1987, the concurrent worsening of the current account by nearly 9 percent of the gross national product, and the resulting dependence on portfolio and short term capital flows are signals of an impending financial explosion like that experienced in Chile and Argentina in the early 1980s" (170).

8 Separate provisions cover Canada-Mexico agricultural trade, and that between the United States and Canada is subject to the bilateral FTA agreement between these countries.
representing 57 percent of bilateral US-Mexico farm trade, with Schedules B, C, and C+ phasing out tariffs within five, ten, and fifteen years, respectively. "In addition, many of the sensitive products in Schedules C and C+, accounting for 13.5 percent of bilateral agricultural trade are protected by tariff-rate quotas (TRQs) during a phaseout period of 10 or 15 years" (Hufbauer and Schott, 1994, 41). These authors also note that, "In most respects, the NAFTA is consistent with the letter of the GATT obligations of all three countries" (161), particularly in terms of its coverage of "substantially all" trade, as required by GATT Article XXIV on regional trading pacts. However, GATT disciplines and review mechanisms in this regard are notoriously permissive (Snape, 1993).

The phasing out of trade barriers protecting sensitive commodities also became a prominent issue on the US side in the political struggle to win congressional support to ratify the NAFTA agreement. This bargaining led to a virtual "grocery list" of side letters to vulnerable, politically sensitive commodity sectors promising swift imposition of safeguard procedures against import surges and stricter regulatory provisions. In US-Mexico trade, this list includes beef, sugar, citrus, tomatoes, lettuce, cucumbers, bell peppers, and celery (The New York Times, 17 November, 1993). These last-minute side deals have assumed unforeseen importance with the sudden, large-scale devaluation of the peso, which has heightened trade frictions barely a year after the ratification of the NAFTA. These recent events receive more detailed attention in later sections, which examine the repercussions of the current Mexican crisis. First, however, it is important to set the stage for the case study of the binational fresh produce

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9 The NAFTA has two types of TRQs: (1) to replace non-tariff measures, and (2) as an agricultural safeguard. Mexico currently allocates in-quota imports by two alternative methods: auctions and direct allocation. TRQs have been imposed by Mexico on the following imports from the United States: corn, barley/malt, dry beans, milk powder, poultry meat, fresh potatoes, fresh and fertilized eggs, and animal fats and oils (USDA.ERS, 1994).
sectors by reviewing the agricultural policy changes that have accompanied Mexico's economic liberalization and deregulation since the mid-1980s.

III. AGRICULTURAL TRADE LIBERALIZATION AND DE-REGULATION

As the counterpart of Mexico's macro-economic reforms, agriculture-state relations have been radically transformed over the past decade. This transformation is characterized fundamentally by a rapid transition from a closed, highly regulated and subsidized agricultural sector to one increasingly open to international competition. Non-tariff barriers, such as import licensing and quota restrictions, have been eliminated or undergone tariffication, and it is estimated that maximum tariff levels were reduced from over 100 percent in 1985 to 20 percent by 1991 (Rello and Perez, 1995). The value of protected agricultural imports fell from 79 percent to 12 percent in the same period, prompting the observation that, while NAFTA requires the elimination of tariffs over 15 years, "Mexico is undertaking a unilateral and more accelerated liberalization: (Ibid., 2).

By the early 1990s, with the exception of corn and beans, the strategy of realigning domestic prices with international prices had led to the elimination of virtually all domestic price supports, and programs subsidizing agricultural credit and production inputs were facing a similar fate. Trade liberalization and the state's withdrawal from direct regulation of product and factor markets has been accompanied by the closure, privatization, and scaling down of public institutions and parastatal agencies engaged in agricultural activities extending from the farm level to marketing and distribution. Concomitantly, public expenditure in agriculture has been cut back.

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10 Fox (1994) notes that "In spite of government efforts to withdraw completely from the markets for wheat, sorghum and soybeans, some ad hoc government purchases continued via negotiated prices (precios de concordación), depending on harvests, newly liberalized imports, and direct pressures from mobilized producers" (247).
The redefinition of state-agriculture relations has had significant repercussions on public policy towards peasant sectors. Thus Fox (1994) observes that the withdrawal of sector-wide state intervention has been felt most severely by small surplus-producing peasants. This reduction of generalized support has only been partially offset by targeted concessions to specific peasant groups and producer organizations and channeled mainly through the National Solidarity Program (PRONASOL) (Ibid., 258-60). These changes represent a significant departure from long-established patterns of state regulation of Mexican agriculture, which combine productivist modernization policies to benefit large-scale commercial producers and agro-industry with an agrarian, reformist focus on social justice and distributive issues informed by the "revolutionary" legacy. The import of the economic reform project for agriculture is to give a neo-liberal, deregulatory thrust to modernization strategy while relegating peasant producer to the realm of welfare policy (Fox, 1994).

This shift away from agrarian reformism as a component of an alternating "two track" policy of state intervention in agriculture is represented by Programa Solaridad (PRONASOL), with its emphasis on rural and urban poverty alleviation, and PROCAMPO, which provides direct compensatory payments to smaller commercial producers of basic grains to cushion the impacts of agricultural trade liberalization. Above all, however, the decline of agrarian reformism is symbolized by the passage in February, 1992 of the constitutional amendment to Article 27 and its implementing provisions. This measure marks the end of the post-revolutionary agrarian process and introduces enabling legislation to permit the privatization of the reform sector.

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11 For discussion of the new rural politics provoked by these policy reforms, see Fox (1994) and Foley (1995).
12 According to Fox (1994), rural safety net programs retained as the state reduced price, credit, and input subsidies to small commercial producers include "most notably, the extensive networks of government-supplied village food stores and rural clinics, and the new National Solidarity Program's soft production loans and village-level public works programs" (247).
The recent neo-liberal reforms—"the latest round of state-driven modernization" according to Foley (1995)—have occurred against a background of declining rates of output growth, falling productivity per hectare, and loss of competitiveness in Mexican agriculture since the 1960s. These trends have intensified in the period 1980/82-1990/92, when agricultural output grew at an average annual rate of 1.2 percent, with food and non-food crops averaging 1.8 percent and -1.7 percent, respectively (Rello and Perez, 1995). Recent FAO research reveals that macroeconomic liberalization and related sectoral policy reforms implemented since 1990 have accentuated the crisis of profitability and competitiveness in Mexican agriculture (Ibid.). This crisis is most apparent in basic grains (corn, wheat, rice) and oilseeds (soya), and particularly severe in regions of rainfed agriculture. FAO projections of Mexican agriculture to 2010 indicate that import dependence will increase, with heavy imports of these basic grains, and an agricultural trade deficit rising from $2.2 billion in 1988-80 to $4.1 billion by 2010.

In their review of projections of the impacts of trade liberalization based on different analytical models, Rello and Perez (1995) find broad agreement that the negative effects on Mexican agriculture will include "growth in the agricultural trade deficit, the displacement of basic crops by cheaper imports, declines in rural employment and incomes, and rising poverty and rural outmigration" (28). In the light of the current economic crisis, they add that "in general it will limit the wages and incomes of large social groups" (28). Rello and Perez (1995) also draw attention to the differential social and spatial adjustments provoked by the agricultural trade opening and the dismantling of support programs among groups of producers, geographical regions, and crop sectors.

With current policies and implementation of NAFTA, the various projection

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13 An estimated 40 percent overvaluation of the peso in the years 1987-93 was a major contributory factor to this situation (Rello and Perez, 1995).
exercises indicate that Mexican agriculture will be unable to absorb the growth of the rural labor force, leading to estimates of rural outmigration ranging from 300,000 to 800,000 peasants annually. Small surplus producers in rainfed areas will be the most adversely affected, and particularly corn producers. (Ibid., 25).

Furthermore, since these same measures are projected to benefit the fruit, vegetable, and livestock sectors, where activities are dominated by large-scale commercial producers, the authors conclude that agricultural deregulation and NAFTA "also will provoke a greater concentration in the distribution of rural income, in a situation already marked by polarization and inequality" (Ibid., 26). Thus CEPAL-INEGI estimates reported by Rello and Perez (1995) indicate that 18.9 million inhabitants, representing 55 percent of the rural population, lived in poverty in 1992, with 8.8 million in absolute poverty. The number of rural poor has increased by 4.8 million since 1984, although growth has slowed in recent years, possibly due to the activities of PRONASOL (Ibid., 5). With this review of the context and possible consequences of recent Mexican agricultural liberalization policies, we turn now to the case study of the Pacific North-West fresh produce complex, one of the main projected "winners" in post-NAFTA scenarios.

IV. US-MEXICO BINATIONAL FRESH PRODUCE PRODUCTION

Even before the debates on NAFTA and GATT were at the level of whispers, Mexico and the United States shared a long history of binational, or interregional, agricultural production and integration. Mexican export agriculture has been supported or developed to a varying degree by the direct involvement of US capital and technology for nearly one hundred years; export production of coffee, sugar, and cotton have been among the commodities most influenced by binational production schemes and partnerships. One of the most
important binational production complexes has been that of export fresh vegetables, the principal focus of this paper. Since the late 1960’s about half of winter fresh produce marketed in the United States has come from Mexico, with the tomato being the most important crop. Concentrated in the northwestern states of Sinaloa, Sonora, and Baja California, fresh produce production has become second only to coffee in importance as an export agricultural commodity (see Table A). The growth of the US-Northwest Mexico fresh produce trade mirrors many other developments that have occurred in the overall trading and economic relationship between the two countries. More recently, it coincides with efforts by the Mexican government to encourage foreign capital investment. The pre-NAFATA neo-liberal policies implemented in the wake of the economic crisis that faced the presidential administration of Lopez Portillo and Salinas de G. in the 1980s have brought very significant changes to this sector. These policy changes, coupled with the economic restructuring of the US agricultural sector, particularly in California, have transformed the nature and scope of the existing binational relationship of the export produce trade in several key ways.

In this section we offer a brief historical overview of this production complex and its organization in the post-WWII period, before the implementation of the neo-liberal policies of the 1980s. Section V examines changes in Mexican export produce production following the implementation of neo-liberal policies by the Salinas administration immediately before the passage of NAFTA, and discusses what effects NAFTA and the recent currency crisis are likely to have on this system.
VI.1. Historical Origins of the Export Produce Complex

The history of US involvement in Northwest Mexico's agricultural history covers at least one hundred years. Under the administration of Porfirio Díaz (1876-1911), the period of Mexican history usually referred to as the Porfiriato, foreign capital was encouraged to invest in Mexico. The Northwest received considerable attention and U. S. investments were mostly concentrated in mining, transportation (railroads and ocean shipping), land speculation, and agriculture (Haber 1989; Salvucci 1991).

After gaining land rights, several US companies began developing the Northwest for the production of export crops (Dunbier 1979; Ladman 1975). The building of large irrigation works by US firms, and the subsequent land sales allowed export production of vegetables and cotton and large sugar plantations to dominate Northwest Mexican commercial agriculture. On the eve of the Mexican Revolution, several key railroad and port facilities constructed in the early 1900s, lured "several thousand Americans," primarily from California, to the region to purchase "land, principally in large tracts from the Mexican owners, with the objects of subdividing and reselling it to American farmers." As a result, several "agricultural colonies of Americans" were begun in the region (USDC 1923:35). The violence and civil strife of the Mexican Revolution upset this early development, but American interest in the region was renewed once this political turbulence had subsided and export vegetable production expanded once again. By 1923, at least 75 percent of fresh produce growers in the Northwest were American, while over 90 percent of investment capital was supplied by US sources (USDC 1923: 35-37, 156; Dunbier 1970:257-261).

The agrarian reforms of the Cárdenas administration (1934-40) altered but did not remove American influence in the region. These reforms did have the effect of weakening land ownership by foreign entities and nationals and many
hectares of agricultural land were transferred to Mexican ownership. While most Americans left Mexico altogether, many immigrants became Mexican citizens to overcome the new restrictions, or entered into an arrangement with Mexican nationals to "borrow" their names for land ownership (prestanombres). These changes notwithstanding, control of export production remained with US firms through their control of credit, contracting, and marketing outlets.

The post-World War II period saw dramatic growth not only for the Northwest but also Mexico as a whole. From 1940 to 1960, Mexico's GDP grew at an average annual rate of 6.5 percent, with the agricultural sector expanding at an annual growth rate of 5.7 percent from 1940 to 1965, causing politicians and economists alike to label Mexico's economic performance a "miracle" (Vernon 1963; Yates 1981; Schumacher 1983; Reynolds 1970; Venezian and Gamble 1969). The Northwest's agricultural sector was particularly active. The Northwest benefited disproportionately from direct government spending on agricultural infrastructure and production, and large-scale public irrigation projects brought millions of acres into production. In 1930, the region had only about 700,000 acres under irrigation, but by 1950, it led the nation in irrigated land with 1.6 million acres. Over the next two decades, lands under irrigation in the Northwest continued to increase, reaching 2.7 million acres in 1960 and 3.3 million acres in 1970 (Yates 1981: 42-49; Dozier 1963). Spurred on by government investment and green revolution experimentation, the region became an important source of grains for the Mexican domestic market (Kutcher 1983). High prices on international markets also encouraged the development of newly irrigated areas for cotton production; based primarily on the Northwest's production, Mexico became one of the world's top five cotton producers during the 1950s and early 1960s (Yates 1981; Dunbier 1970; Hewitt de A. 1978; Dorronsoro 1964).
VI.2. Post-WWII Developments

While cotton and grains came to dominate the region's agricultural landscape during the postwar period, Northwestern production of fresh tomatoes and vegetables, particularly in northern Sinaloa, became the primary source for export vegetables, providing over 80 percent of the nation's total export output. In 1940, Mexico exported over 16,000 metric tons of tomatoes. over 100,000 metric tons in 1945, and shipments reached 153,000 metric tons by 1959.

However, during the 1960s and 1970s, the Northwest export produce trade entered a new period of rapid expansion. Between 1964 and 1969, average annual tomato exports were 237,000 metric tons and growth continued through the 1970s, exceeding 400,000 metric tons in 1977 (USDA 1980b). Several key factors were behind this dramatic growth. First, US demand for fresh produce increased significantly as dietary habits changed. Second, a set of environmental, labor, and political crises adversely affected growers in those areas of the US that specialized in winter produce, primarily Florida, but also the southern portions of Texas, Arizona, and California (Ullman 1957; Juniper 1969). Florida's position was undermined by two developments. The vegetable and tomato growing areas suffered a series of frosts in the late 1950s and early 1960s, which destroyed much of the winter crop. Secondly, the economic boycott of Cuba by the US government further weakened Floridian growers' ability to supply US markets. During the 1940s and 1950s, Cuba had become an extension of Florida's winter produce operations; Florida-based growers were invested in and controlled Cuba's export produce trade to the United States (USDA 1969, USDA 1980b:4). Cold War antagonisms, however, led the Kennedy administration to impose an economic boycott on Cuba in the early 1960s. The combination of the frosts and
the boycott of Cuba led to dramatic drop in supply, causing winter produce prices to soar (USDA 1969; USDA 1980b; Sanderson 1986).

The termination of the Bracero program in December 1964 also contributed to the growth of the Northwest export trade. With the impending termination of the program, growers expected labor costs to increase and many abandoned highly labor-intensive crops like tomatoes, or increasingly turned to commodities that were better suited to mechanized harvesting in the fields (Valdes 1994; USDA 1980b; USDA 1969; Mares 1987; Sanderson 1986; Jones and Rice 1980).14

Many California agribusiness saw Northwestern Mexico, particularly Sinaloa, as a substitute growing region for labor-intensive winter crops and what followed was "an almost immediate influx of American capital and know-how into Mexico" (USDA 1980b:4). Along with direct capital investment, seeds and plants were imported from the United States. Americans also provided technicians and experienced fieldmen to advise Mexican growers on how to adapt US-bred plants to local conditions. US-based farm and packing equipment manufacture also encouraged the adoption of modern harvesting and packing operations (Dunbier 1970; Firch and Young 1968; Hewitt de A. 1978; Mares 1987; Sanderson 1986).

The former California growers who had entered fresh produce production in Sinaloa during the 1940s and 1950s (and even a few from the 1920s) had maintained close links to brokers, distributors, and other growers and shippers in California and Arizona. Consequently, when the opportunity for an expanded market presence occurred during the late 1950s and early 1960s, the necessary links were already there for Mexican growers to use. As potential profits in the export trade increased, other Mexican growers entered the trade, and by the

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14 On the accelerated introduction of mechanized tomato harvesting in California in the later 1960s, see Rasmussen (1982).
1970s what had been limited to only a dozen or so growers in the 1950s now involved hundreds of local growers. As the trade took on a life of its own, Mexican growers established their own marketing and trade relationships. While these relationships kept growers in both countries close, direct links between growers in the two countries decreased, while linkages with brokers and distributors grew and became more complex.

Since the late 1960s, the Sinaloa-based export produce trade has been dominated by large Mexican growers located in the Culiacan Valley and produce brokers and distributors based in the US entrepôt of Nogales, Arizona. While some 1000 growers now produce winter produce in Sinaloa, the ten largest growers account for roughly half of all export production. The large operators also dominate processing and packing facilities. Of the hundred or so packing sheds in the region, the top 10 producers own the largest 25 packinghouses and handle over half total vegetable exports (Mares 1987; Sanderson 1986; USDA 1980b). Produce brokers and distributors based primarily in Nogales, Arizona, keep marketing control and credit access in the hands of US firms. As some Mexican growers have expanded, however, many of these have become partners with, or have bought out, some of the most important distributors and brokerage houses that handle their trade.

Today, Sinaloa-based production continues to supply the bulk of Mexico's fresh produce exports and especially the more valuable crops, notably tomatoes, but also squash, bell peppers and cucumbers. Its historic links have allowed the largest growers to maintain and use their close relations with California and Arizona growers, distributors, and brokers to expand and have access to US markets. Production and marketing strategies have borrowed heavily from, and are geared to match, the existing produce distribution network established in the US. The Sinaloan growing region thus closely resembles those of California:
production occurs on large farms, using the latest technologies, and depends on large-scale irrigation projects. Farm labor markets likewise resemble those of the Golden State as well; some 200,000 seasonal farm workers are required. Between 50 and 75 percent of farm workers come from outside the region, mostly from Mexico’s less developed southern states, especially Oaxaca’s Mixtec Indian population. Sinaloan growers even abide by California marketing orders and contribute to agricultural research on horticultural plants conducted by the State of California and the University of California (Rochin and Amon 1988; Stuart and Kearney 1981; Kearney 1986; Lizárraga 1993).

Although an important beneficiary of federal irrigation projects and subsidized PEMEX petrochemical and fuel oil prices, the Sinaloan-based export produce trade has had remarkably little direct involvement with the national government and its agricultural bureaucracy. This relative independence of the export trade is explained by its close historical ties and orientation to US markets, rather than domestic ones. Credit and capital investment for the trade has traditionally come from US sources, primarily from the Nogales-based brokers and distributors, or larger Mexican growers involved in the trade itself. Mexican banks and agricultural agencies considered vegetable production in the region too volatile and risky to invest in. Regional political power, which rests in part on the wealth generated by the overall orientation of the Northwest’s economy to the US, has also been successful in limiting more direct intervention by the national government in the export trade.

15 Large growers have 300-1,500 hectares in production, plant greenhouse-grown seedlings of hybrid varieties in high densities, and apply the full panoply of chemical-intensive practices, including soil fumigation, heavy inputs of fertilizers, and use of insecticides and fungicides. For further details, see Lizarraga (1993).
V. ECONOMIC LIBERALIZATION, NAFTA, AND US-MEXICO FRESH PRODUCE

The prolonged economic crisis of the 1980s has provoked dramatic changes in the direction of Mexican economic policy, including legislative reforms and incentives to encourage foreign investment. The best known example perhaps is the expansion and promotion of the BIP/maquiladora program. However, these new policies also have facilitated foreign participation in the export agricultural sector. These changes have stimulated significant growth in shipments of fresh and frozen produce from Mexico to the US; from 1983 to 1989, US agricultural imports from Mexico increased 83 percent (US Federal Reserve Bank 1989). In Northwest Mexico, these new policies have led to the expansion of new production areas geared specifically to the export trade in fresh produce.

One of the most important of these areas is Baja California’s San Quintín Valley, located about 150 miles south of the US-Mexico border. Export vegetable production in San Quintín is a direct outgrowth of the Sinaloa-based produce system. Beginning in the 1970s, a handful of some of Sinaloa’s largest growers began developing the valley to grow tomatoes and other export vegetables. At first, tomato harvesting was geared to meeting demand in US markets during the spring gap between the growing seasons of Sinaloa and California. However, following the introduction of neoliberal policy reforms, and the favorable response by US growers, tomato production has expanded and continues will into summer, and now coincides with much of the season when California’s growing areas, particularly in its Southcoast counties (Ventura, Los Angeles, Orange, and San Diego counties), are in full production.

In 1986, the Mexican government decided to extend the rules and regulations of the BIP/maquiladora program to agricultural activity, applying a
liberal definition of the border zone, which included the San Quintín Valley, for this purpose. Under this program, duty-free, imported components undergo further processing or secondary assembly for eventual re-export, mainly to American markets, with taxes and duties being paid only on the value-added. As applied to agricultural activities, the reinterpreted *maquiladora* regulations permitted California growers to introduce farming equipment, seeds, chemicals, and other capital inputs into Mexico duty-free for the production of produce bound for the US. In partnership with Mexican farmers, California agricultural firms now could engage in the direct management of farm production to supply US markets. Mexican farmers, in effect, were allowed to formally lease out their lands and expertise to California growers. Prior to these reinterpretations, direct involvement of foreign firms, particularly access to land, was formally forbidden. In practice, however, "silent partnerships," contract requirements, control of marketing and distribution outlets, and the use of *prestanombres* had allowed some US growers to participate in Mexican farming operations. The new rules attenuated the risks inherent in such arrangements.

California fresh tomato growers were drawn to San Quintín for several reasons. San Quintín's coastal valley and location are well suited for the type of production that these growers are familiar with in California. The growing season for San Quintín also coincides well with the season in some of the most important production areas, namely, California's southern coastal counties. The close proximity to the US also allows for close monitoring and management of the San Quitín's operations. These locational advantages contribute to the region's potential, but changing economic circumstances in California explain the recent expansion of production in San Quintín.

In the mid-1980s, California growers were expecting the passage of federal legislation to limit and control illegal labor migration from Mexico to the US
Under IRCA, employers of undocumented workers would be subject to legal sanctions and fines; for the first time, the hiring of undocumented workers would become illegal, and growers accordingly anticipated an increase in labor costs. Given the already wide wage differential, San Quintín became an even more attractive production site for California growers. Relying on the same flow of migrant farm workers that worked the Sinaloa fields, growers in San Quintín would have access to workers who were paid only about $4.00 a day.

In Baja California, it costs about $3.89 per carton (approx. 35 lbs.) to grow, pick and pack tomatoes, transport them to the border, and pay customs duties. For San Diego growers, the cost of growing, picking and packing is $5.10. These relative production costs and the tightening of immigration policy (plus the added pressure to convert agricultural land to urban and suburban use) offered considerable incentive for tomato growers to expand, or even relocate, production from the Southcoast counties into Baja California (Villarejo 1989; Cook 1988).

In 1980 Baja California shipped about 25 million pounds of tomatoes to the US; by 1986, shipments had soared to 250 million pounds as acreage in the Southcoast counties of California dramatically declined. Fresh tomato acreage in those counties dropped from about 7400 acres in 1980 to less than 3000 by 1986 (see Table B). The success experienced by tomato growers led other California growers to turn to San Quintín as a production site for US markets: strawberries, cherry tomatoes, squash, celery, and bell peppers have also become important export commodities for San Quintín (Drum 1989a, 1989b, 1989c; Cook 1988). Baja California, which produced a paltry 1.9 percent of Mexico's total annual fruit and vegetable crop in 1970-1972, accounted for 13.3 percent by the late 1980s (Stamatis Moldonado 1989a, 1989b).
V.1. Binational Partnership in the San Quintín Valley

A revealing example of binational cooperation is the relationship between American agro-food giant Dole Food Company and Mexico's Canelos Brothers, which forms one of the most significant binational partnerships in the San Quintín growing area. Dole Food Company, formerly known as Castle and Cook, is the largest grower-shipper of fresh fruits and vegetables in the US, with current annual sales in the neighborhood of $3 billion. Best known for their tropical fruits, particularly pineapples and bananas, Dole, since the 1980s, has become an important leader in developing markets for "brand name" fresh fruit and vegetable sales. As part of their effort to maintain a year-round presence on US produce markets, Dole entered into a partnership with the Canelos Brothers to grow tomatoes in the San Quintín Valley (Lizárraga 1993).

Based in Sinaloa, Canelos Brothers grew out of the tomato export trade in the 1960s and 1970s. The firm is one of Mexico's largest grower-shippers and maintains operations not only throughout Mexico, but Central America as well; its success and dominance led one trade journal to call it "the Bud Antle of Mexico" (a reference to the important California-based agribusiness that was bought out by Dole in the late 1980s) (Drum 1988). The Canelo Brothers were one of the first of the Sinaloa-based growers to develop the San Quintín Valley for export produce production.

Under the partnership, Dole provides capital and technological advice, co-owns packing sheds with the Canelo Brothers in the valley, and markets the produce in the US through its marketing and distribution network. The Canelo Brothers oversee production, secure labor, and contract with some twenty different other local growers for production. Under the partnership, Dole and Canelos Brothers operate 2500 and 3000 acres in tomato production (Lizárraga 1993). Other large US-based firms involved in San Quintín include Agri-Sales,
Produce Specialist, and Giumarra. These firms, like Dole, are involved in joint operations with Mexican growers. And as with the Dole-Canelos operations, tomatoes are the most important crop being grown.

The interest in San Quintín by US-based grower shippers has led to a saturation of the valley's agricultural lands, almost all of which are being utilized. Production, meanwhile, has continued to increase as per acre yields have risen. Improved plant varieties and the use of drip-irrigation methods since the early and mid-1980s, for example, have had a dramatic effect on tomato production. Thus, while acreage in fresh tomatoes has remained fairly constant throughout the 1980s, yields and production have grown considerably. Larger and better established firms have so dominated production in the valley that new ventures find it difficult to get started in the area; Wally Springstead of Produce Specialist in Chula Vista, California, is quoted as saying large corporate farming operations in the area are "killing the deal for everyone else" (Drum 1988c:53). Superior Farming, based in Bakersfield, California, which operated more than 1,000 acres in a joint production operation with a large Mexican grower-shipper, the Rodriguez family, pulled out of San Quintín saying that their operations were "not particularly profitable" (Drum 1988c:53).

The most basic problem affecting production in San Quintín is the limited amount of water available to irrigate. Irrigation water comes primarily from groundwater pumping and the aquifer has been falling at a rate of about ten to twelve inches per year. Sea water has been able to intrude into the aquifer as groundwater levels have declined, increasing salinity throughout the valley; about half the wells in the valley have salinity levels of 2000 to 3000 ppm. Several grower-shippers interviewed by Lizárraga (1993) feel that San Quintín's productivity will be severely affected by this and estimate that farming at the present level will last no longer than ten to fifteen years more.
Many large US grower-shippers have thus begun to explore the possibility of expanding their operations into other areas of Baja California. Dole, for example, has begun test plots throughout the Baja Peninsula to assess the feasibility of fresh produce production (Lizárraga 1993). Places that have received considerable attention from the trade include the areas around Vizcaino, Santo Domingo, the Magdalena Plain near Cuidad Constitución, and San José del Cabo. These all have the potential to be productive areas for export vegetables; indeed, they are already supplying produce to local and domestic Mexican markets. In San José del Cabo, one venture, Del Cabo, a joint operation between California-based organic growers Steve Farrer and Jacob Farms, has already begun vegetable exports to the United States (Kraus 1989; Lizárraga 1993).

Despite the potential, however, several obstacles remain. One of the most important constraints is the distance from the United States and the lack of a good highway to transport goods to California. Del Cabo's operations in San José de Cabo, for example, are only profitable because they are involved in transporting high-value, organically-grown winter produce to specialty markets, such as up-scale restaurants and consumers in the United States. The high return on these crops, which include tomatoes, cherry tomatoes, basil, egg plant, and sweet peas, allows for their transport by air to western US markets (Kraus 1989).

However, water remains an important consideration for all of the areas currently being considered for expansion. These valleys are located in arid areas and receive little precipitation. As in San Quintín, growers would have to rely on underground aquifers for their water. Given the low levels of rainfall, extensive agricultural activity will result in "mining" the aquifers and their depletion, even if water-saving technologies, such as drip irrigation, are used. In spite of these problems, growers seem more than likely to expand into these areas. Fairly good
soils and the availability, at least for now, of water make these areas particularly attractive (Lizárraga 1993).

Another pre-NAFTA development in the Mexicali area has been the emergence of the "agromaquilas" (Flaherty 1988). Like their manufacturing namesake, agromaquilas import unfinished commodities in-bond to Mexico where they are assembled or finished, then returned to the US for distribution. The primary goal is, of course, to take advantage of Mexico's low wages. In the case of agricultural products, crops grown on the US side are shipped to packing sheds in Mexicali, where they are sorted, cleaned, and/or packaged. Most of the US-grown produce comes from areas near the border, such as the Imperial Valley. In some cases, however, agricultural products are shipped considerable distances to the agromaquilas; some agromaquilas accept pistachio and almond nuts for shelling from as far away as Northern California (Stockton), some 400 hundred miles to the north (Lizárraga 1991).

V.2. The 1990s

By the time the NAFTA negotiations began, California grower-shippers had in effect already transformed San Quintín into an extension of their US operations. Lobbying by California agribusinesses for the passage of NAFTA was quite vigorous, as some interests anticipated benefits from the opening up of Mexican markets to US commodities, particularly processed foods.16 Binational vegetable growers also expected NAFTA to further facilitate the relocation of production to Mexico. These hopes will not be immediately realized, however. Because of pressure from Floridian growers, agricultural tariffs and duties on Mexican-grown produce will only be phased out over ten to fifteen years. Nevertheless, the immediate effects of NAFTA on California binational

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16 Opponents in California included the California Floral Council and other nursery product sectors, which represent a major segment of California agriculture by sales.
period of political and economic crisis, culminating in the first few months of 1995 in the collapse of the peso against the dollar, a radical rise in interest rates, the multi-billion dollar US-IMF bailout, and the overall accelerated decline of living standards in Mexico.

In late 1994, USDA officials had predicted record levels of US agricultural exports to Mexico. With California exports in the vanguard, Mexican consumers were expected to purchase US processed foods, wines and fruits. Other US sectors, particularly grain producers, also looked forward to expanding their sales, especially of corn, to Mexican markets. Comparing the period January-September, Mexico's share of US corn exports rose from 0.9 percent in 1993 to 7.4 percent in 1994, an increase of 644 percent in value terms (USDA/ERS, 1994). However, the devaluation of the Mexican peso in the closing weeks of 1994 has radically altered these perspectives and although reports on US agricultural exports are not yet available, major reductions are expected.

For binational producers, however, the collapse of the peso has led to rapid growth as production costs of Mexican produce have declined very considerably. Mexican wages and land values, for example, have dropped in dollar terms by 50 percent or more, leading the USDA's James Zorn to comment in January that "now is the time" for US growers to expand production in Mexico. Mexican-grown fresh tomatoes have thus become even more attractive to produce brokers and retailers in the US. Threatened by these developments, Floridian growers have accused Mexican producers and their California partners of unfairly "dumping" vegetables on the US market. In 1994, Florida's share of the winter tomato market was about 57 percent whereas, in the first quarter of

17 According to press reports, Floridian growers are lobbying for changes in anti-dumping legislation and attacking the lack of a price-based safeguard mechanism to restore duties to pre-NAFTA levels under certain market conditions, such as import surges (The Packer, 27 February, 1995, p. 2A).
1995, following the peso devaluation, its share had dropped to 36 percent (*The Packer*, 27 February, 1995).

In Mexico, export tomato production costs (labor, planting, rent, etc.) had been about $2500 per acre, before the peso devaluation, while in Florida growers pay about $4000 per acre. Tariffs, plus the cost to transport Mexican produce to the US border, however, had kept the lower Mexican production costs from giving Mexican produce more market share. A box of Florida tomatoes grown in the early 1990s thus costs about $6.50, while the price for Mexican grown tomatoes was just over $7.00. Under NAFTA, tariffs on tomatoes are scheduled to be reduced in annual increments of 10 percent over the next ten years. Last year, during the first year of the agreement, Florida tomato growers claimed already to be negatively affected by these reductions, with some growers claiming a 30 percent drop in sales (Musibay 1994; Arnett 1994). The devaluation has suddenly made Mexican tomatoes very cheap and available to US markets, causing an overall drop in wholesale tomato prices. In early January, for example, boxes of tomatoes were selling at about $14 each. Prices fell to $2.50 in early February, but by the end of that month had recovered to $7.00. Mexican growers are currently shipping about 300,000 boxes a day, while "Florida's daily shipments have fallen as low as 100,000" (Busey 1995).

In response to these fluctuations, the Florida Tomato Exchange (FTE), a grower-shipper cooperative, filed a complaint to the US International Trade Commission (ITC) claiming that Mexican growers were "dumping" tomatoes in the US market. Under a special provision of NAFTA (Section 316), put in place to appease Florida growers, the US may impose higher tariffs on Mexican commodities if they are found to be unfairly underpriced compared to US commodities. As the governing body, the ITC must monitor and impose the tariffs if unfair trade is found. The FTE complaint sought the imposition of a 50
percent tariff on Mexican tomatoes for the rest of the winter season (to the end of April). On Monday, April 17, however, the ITC, voting 5 to 0, "denied any immediate relief" to Florida growers, but ordered an investigation of the charges, due July 27 of this year (Associated Press, 1995).

Protests by Florida vegetable growers against dumping of Mexican produce and the perceived limitations of the tariff quota rate (TRQs) mechanisms of NAFTA continued to grow during 1995, and have reached new levels of intensity since the beginning of the 1996 season on 15 November, 1995. Unpublished reports of the USDA Market News Services indicate that Mexican shipments for the period October, 1994 - November, 1995 of tomatoes, squash, and peppers rose by 195, 193, and 407 percent, respectively, when compared to the averages for the same period of the 1993 and 1994 seasons. These significantly higher shipments were concentrated in the winter months, attracting the ire of Florida grower-shippers, who allege that they have lost substantial market share for various winter vegetables since NAFTA (The Packer, 11 December, 1995, pp. 1-2A). According to an official of the Florida Department of Agriculture, declining market share in tomatoes and winter produce since 1991-92 has provoked packinghouse closures and falling numbers of commercial growers (Ibid., p. 2A).

The dramatic increase in Mexican produce during the 1995 season led to declining US wholesale prices for winter and early summer produce. Florida-based growers, which of all US growers compete most directly with Mexican producers, have been particularly affected by the Mexican trade. Wholesale prices of Mexican grown tomatoes throughout the 1995 season, for example, averaged about $6 per 25-pound box, well below the reported average production cost to Florida growers of $9 per box. The largest grower in Homestead, Florida, that state's most important winter vegetable growing area,
has reportedly cut back acreage and production in tomatoes because of the low prices, from 5,200 acres six years ago, to about 2,000 acres this year; tomato pickers employed on his operations have dropped from 1,500 last year, to about 800 this year, and those remaining field workers and packers are expected to work fewer hours than last year ("Florida's Harvest of Discontent," Miami Herald, 1 January, 1996).

Growers staged a series of highly publicized protests during the first few weeks of the 1996 season, dumping loads of their vegetables in the parking lost of packinghouses throughout the state. The demonstrations were attempts to put pressure on the Clinton Administration to raise tariffs on Mexican imports under the "snap-back" TRQ provisions of NAFTA, which can be implemented if one country's exports exceed the quota volume ("A Growing Problem: Fed-up Farmers Protest Flood of Vegetable Imports," Miami Herald, 7 December, 1995; "The Great Tomato Dump," Miami Herald, 21 December, 1995). Florida growers are demanding a change in the way these quotas are assessed, and are advocating a weekly volume quota system rather that the present quarterly system. This demand was formally submitted to the US Secretary of the Agriculture by the Florida Fruit and Vegetable Association in November, 1995.

For California binational growers, however, the peso devaluation has enhanced the attractions of production in Mexico, as well as future expansion or relocation of production. Even before the crisis, for example, several sectors of California's agribusiness were assessing long-term possibilities of accelerating the relocation of production facilities to Mexico. Frozen and processed food firms, like the fresh vegetable and tomato sectors, have long been involved in Mexican production. NAFTA, however, promised not only lower production

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18 A well-known example is that of Pillsbury-Green Giant which opened a frozen food plant in Irapuato in 1983. Following its take-over by the UK food conglomerate, Grand Metropolitan, Green Giant announced the closure of its Watsonville, California plant in 1990 and the transfer of these operations to Irapuato, Mexico, where over 20 US frozen food companies are located.
costs but also greater market access to Mexico. While domestic spending in Mexico will undoubtedly be depressed, export markets in the US will still be attractive targets as firms respond to the combined effects of tariff reductions and the devaluation. California citrus and table grape producers were likewise expected to relocate or expand their production into Mexico with the passage of NAFTA; specific areas under consideration included the foothills of Sonora, and the growing areas of the Bajio region of central Mexico. The devaluation and economic crisis may well speed up some of these plans.

CONCLUSION

The current economic crisis, precipitated by the 20-21 December, 1994 devaluation, the floating of the peso and subsequent flight of foreign speculative capital, adds a significant new level of complexity to adjustment processes in Mexican agriculture. As we have seen, the accelerated pace of deregulation and trade liberalization was imposed on a sector already experiencing severe structural problems, accentuating the intensity of transition. Moreover, despite the mitigating effects of PROCAMPO and PRONASOL on rural incomes, this rapid transition has coincided with the scaling back or eliminating of production-oriented agricultural development programs. This trend is likely to continue in the present climate of austerity and fiscal retrenchment, reinforced by restrictions on public credit, high real interest rates, and the serious financial straits of the private banking sector.

Although barely discernible in the present phase of macro-economic adjustment, significant changes in the agricultural restructuring process can be anticipated as the new economic crisis unfolds. However, the extent to which the neoliberal thrust of Mexican agricultural policy will be modified by these new circumstances remains an open question.
At this writing (May, 1995), preliminary estimates suggest that Mexican GDP will decline by 4-5 percent in 1995, accompanied by a fall in real wages of 20-40 percent in a context of rising urban unemployment and resurgent inflation (Rello and Perez, 1995; Wall Street Journal, 12, May, 1995). After declining from the fixed rate of 3.46 peso per dollar before 20 December, 1994 to 7.52 pesos on 9 March, 1995, the exchange rate since has been relatively stable at this level and shown few signs of strong recovery. Subsequent economic prospects will depend on the speed of structural adjustment, and some authors assign agriculture a key role in this process (Robinson et al., 1995).

The peso devaluation potentially will benefit producers of export crops, such as fruit and vegetables, as we have already noted. However, since approximately 95 percent of Mexican fresh produce exports are directed to the US market, future expansion depends critically on the response of US policymakers and growers to this increased competition. Producers of import-substituting crops, including grains, oilseeds, and forage crops also stand to gain from the increased protection afforded by exchange rate depreciation. Yet the supply response in these sectors is difficult to estimate. Thus the expansion of high-value export crops, notably fruit and vegetables, is likely to bid land away from some basic staples, such as corn and beans, in irrigated areas (Robinson et al., 1995, 12), and output growth may be inhibited by retrenchment in public rural investment and production support programs, and the reduced availability and higher real cost of agricultural credit.

This new situation has prompted several observers to recommend changes in PROCAMPO that would shift resources away from direct payments to farm households and into measures to stimulate output and productivity growth in the seven basic crop sectors targeted by the program (Rello and Perez, 1995; Robinson et al., 1995). The heavy fiscal burden of these income support
payments, which are to be given for a 15-year transition period based on historical acreage planted to eligible crops, casts further doubt on the survival of PROCAMPO in its present form.

The economic recession and macro-economic stabilization measures introduced by the Zedillo administration will have significant repercussions on labor markets, employment, and poverty in Mexico and the United States, particularly in California, Arizona, Texas, and Florida. Computable general equilibrium models of US-Mexico relations under a NAFTA before the present crisis indicated that Mexican agricultural restructuring, notably in food corn and feed grains, and the accompanying rural-urban migration would have greater impact on relative wages in both countries than either trade or investment liberalization (Hinojosa-Ojeda et al., 1992). With the peso crisis and recent austerity measures, urban employment opportunities and real wages for unskilled workers can be expected to decline significantly, widening Mexico-US wage differentials and stimulating increased illegal immigration to the US.

These considerations partly explain US interest in helping Mexico achieve a soft landing in the present crisis. The $50 billion financial assistance plan announced on 31 January, 1995 by President Clinton to stabilize Mexican financial markets is part of this strategy, although it has been characterized as "welfare for the wealthy," namely, the foreign investors holding Mexican stocks and bonds (Yotopoulos, 1995). Robinson et al. (1995) focus their attention on US agricultural policies which, they suggest, "will have an important role in shaping Mexican adjustment through their effects on Mexican farm export growth, on rural labor demand and, consequently, on migration" (1). These expectations are borne primarily by the prospects for increased US imports of Mexican fresh produce. "An important determinant of the landing conditions for Mexico will be the willingness of the US to accept higher levels of horticultural imports from
Mexico as the peso depreciates, despite the right it has preserved under NAFTA for 'snap-back' protection. Effects of a snap-back would be significant for the Mexican economy because horticulture is the main potential source for expanded Mexican farm exports, and because labor migration flows the US are highly sensitive to employment conditions in rural Mexico" (Ibid., 2-3).

In view of the strong defensive reaction discussed earlier of the Florida Tomato Exchange to rising Mexican tomato shipments following the peso devaluation, it is difficult to be sanguine about the prospects for a sustained expansion of Mexican produce exports. If this fails to materialize due to US tariffs imposed under the "snap-back" provisions of NAFTA, the computable general equilibrium models estimated by Robinson et al. (1995) predict very limited output growth in Mexican fresh produce sectors and a corresponding increase in migration, ranging from 20 to 150 thousand. Conversely, without higher tariffs, exchange rate depreciation results in a "dramatic expansion" of Mexican fresh produce output and exports, and increased US market share (Ibid., 13). For these authors, "The result is a policy dilemma for the US—increased protection for domestic farmers leads to increased migration from Mexico" (Ibid., 14).

The intensification of such pressures will exacerbate the already heated controversy aroused by US immigration policy. This controversy and the climate of racial prejudice it engenders in states with large immigrant populations is symbolized by the passage in 1994 of California's Proposition 187, which denies public services to undocumented immigrants. Increased Mexican immigration also is likely to depress wage levels in low-skill, low-wage sectors, particularly in

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19 As a safeguard against import surges, tariff rate quotas (TRQs) were introduced for sensitive fruit and vegetable products that had been subject to US tariffs before NAFTA. Within-quota imports are to increase at a compound rate of 3 percent over ten years. Tariffs can be imposed on over-quota quantities and will "be eliminated (not phased out) at the end of 10 years. The tariff rate is not to exceed the lower of the most-favored-nation (MFN) rate as of July 1991 or the prevailing MFN rate. For the US, this 'snap-back' provision applies to selected horticultural imports" (Robinson et al., 1992,2).
California, which is the largest recipient of these flows, as existing Latino workers compete with new immigrants (Hinojosa-Ojeda et al., 1992). Reviewing their modeling of NAFTA, these authors stress that "The most important binational determinate for raising the level of employment and income in the US and Mexico is...a high rate of growth of the Mexican economy."

"Mexican investment and growth...is essential for the maintenance of high levels of US exports to Mexico and thus job creation in the US and California. A financial imbalance such as the 1982 debt crisis would have a devastating impact on the Mexican economy and detrimental spillover effects on the US and California labor markets" (Ibid., p.13).

The current economic outlook certainly conforms to this scenario but the severity of the political crisis has added unanticipated complications. The sustainability of Mexico's neoliberal reforms and orderly progress under NAFTA towards freer trade between the US and Mexico have now become more open questions than appeared even remotely conceivable on January 1, 1994.

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20 To appreciate the potential explosiveness of this situation, recent analysis draws attention to the participation of the Latino "working poor" employed in secondary low-wage labor markets in the April-May, 1992 Los Angeles uprising and the need to address problems of Latino poverty and disenfranchisement (Pastor, 1993).
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Modelling of the Economic Implications of a FTA with Mexico and a
NAFTA with Canada: Report on Investigation No. 332-317 under Section


Table A
Mexican Agricultural Exports of Principle Commodities
(Annual Averages, 1978-88)

<table>
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<tr>
<th>Commodity</th>
<th>Average value (millions of US$)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total exports</td>
<td>1,807</td>
<td>100</td>
</tr>
<tr>
<td>Coffee</td>
<td>486</td>
<td>27</td>
</tr>
<tr>
<td>Fresh vegetables</td>
<td>390</td>
<td>22</td>
</tr>
<tr>
<td>(Tomatoes</td>
<td>215</td>
<td>12</td>
</tr>
<tr>
<td>other fresh veg</td>
<td>175</td>
<td>10</td>
</tr>
<tr>
<td>Cotton</td>
<td>190</td>
<td>11</td>
</tr>
<tr>
<td>Cattlee</td>
<td>144</td>
<td>8</td>
</tr>
<tr>
<td>Melons</td>
<td>52</td>
<td>3</td>
</tr>
<tr>
<td>Strawberries</td>
<td>37</td>
<td>2</td>
</tr>
<tr>
<td>Other fresh fruit</td>
<td>38</td>
<td>2</td>
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<tr>
<td>Other agricultural products</td>
<td>470</td>
<td>26</td>
</tr>
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Sources: USDA and Banco de Comercio Exterior cited in Thompson and Hillman 1989
Table B
Baja California and California Fresh Tomato Acreage
by Selected Growing Region, 1970-86
(aces)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>San Quintín. BC</td>
<td>1870</td>
<td>9600</td>
<td>8950</td>
<td>9020</td>
<td>7480</td>
<td>10,300</td>
<td>10,545</td>
<td>10,280</td>
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<tr>
<td>South Coast, CA</td>
<td>7740</td>
<td>7840</td>
<td>8960</td>
<td>7500</td>
<td>7120</td>
<td>4340</td>
<td>3450</td>
<td>3030</td>
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<tr>
<td>San Joaquin V., CA</td>
<td>8400</td>
<td>9300</td>
<td>8260</td>
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<td>11,600</td>
<td>12,100</td>
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<td>Central Coast, CA</td>
<td>3780</td>
<td>5150</td>
<td>5060</td>
<td>4400</td>
<td>3400</td>
<td>3200</td>
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<td>3400</td>
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<tr>
<td>Imperial Valley, CA</td>
<td>2000</td>
<td>1200</td>
<td>1250</td>
<td>1360</td>
<td>1450</td>
<td>1500</td>
<td>1300</td>
<td>1000</td>
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* Date for California regions is for 1973
Sources: Cook 1988 and County Commissioner's Reports various years
Table C
San Quintín Fresh Tomato Acreage and Yields, 1970-1986

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
<th>Yield (tons/acre)</th>
<th>Production (tons)</th>
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<tbody>
<tr>
<td>1970</td>
<td>1870</td>
<td>5.5</td>
<td>10,244</td>
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<tr>
<td>1980</td>
<td>9600</td>
<td>13.4</td>
<td>128,370</td>
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<tr>
<td>1981</td>
<td>8950</td>
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<td>1982</td>
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<td>1983</td>
<td>7480</td>
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<td>1984</td>
<td>10,300</td>
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<td>142,607</td>
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<tr>
<td>1985</td>
<td>10,545</td>
<td>16.3</td>
<td>171,760</td>
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<tr>
<td>1986</td>
<td>10,280</td>
<td>16.7</td>
<td>172,069</td>
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Source: Data are converted and rounded from Table 1 in Cook 1988.
Table D
Mexican Export Vegetables Shares by Region, 1970-1988
(annual averages by percent)

<table>
<thead>
<tr>
<th>State</th>
<th>70-72</th>
<th>73-75</th>
<th>76-78</th>
<th>79-81</th>
<th>82-84</th>
<th>85-87</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinaloa</td>
<td>60.7</td>
<td>57.25</td>
<td>62.3</td>
<td>59.1</td>
<td>53</td>
<td>51</td>
<td>45.1</td>
</tr>
<tr>
<td>Border States</td>
<td>12.2</td>
<td>14.1</td>
<td>12.7</td>
<td>15.5</td>
<td>22.4</td>
<td>25</td>
<td>32.2</td>
</tr>
</tbody>
</table>
| (Baja California| 1.9   | 4.2   | 4.8   | 6.0   | 9.7   | 12.1  | 13.3|*
| Rest of Mexico | 27.1  | 28.7  | 25    | 25.4  | 24.5  | 24    | 22.7 |

*The figures for Baja California represent total average annual share of national production.

Source: Stamatis 1989