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## The feminization of agriculture? Economic restructuring in rural Latin America

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The Feminization

of Agriculture?
Economic Restructuring
in Rural Latin America

by Carmen Diana Deere







## The Feminization of Agriculture? Economic Restructuring in Rural Latin America

by Carmen Diana Deere February 2005

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### acronyms

ACEP Asociación Colombiana para Estudio de la Población

ATC Asociación de Trabajadores del Campo

AVANCSO Association for the Advancement of Social Sciences (Guatemala)

BID Banco Interamericano de Desarrollo

CBI Caribbean Basin Initiative

CELADE Centro Latinoamericano y Caribeño de Demografía CEPAL Comisión Económica para América Latina y el Caribe

CEPLAES Centro de Planificación y Estudios Sociales

CETRA Centro de Estudios del Trabajo

CIERA Centro de Investigación y Estudios de la Reforma Agraria CLOC Coordinación Latinoamericana de Organizaciones del Campo

EAP economically active population

FAO Food and Agriculture Organization of the United Nations

FLACSO Latin American Faculty of Social Sciences

FTAA Free Trade Area of the Americas FUNDAJ Fundação Joaquim Nabuco GDP gross domestic product

IICA Instituto Interamericano de Cooperación para la Agricultura

ILO International Labour Organization
ISI import substitution industrialization
LSMS Living Standard Measurement Survey
NAFTA North American Free Trade Agreement
USAID US Agency for International Development

### summary résumé resumen

#### SUMMARY

The main trends associated with the economic crisis, neoliberal restructuring, and the growth of rural poverty rates in Latin America include a continued diversification of rural household income-generating strategies, an increase in the number of household members seeking off-farm employment, and the increased participation of rural women as both own-account and wage workers in the agricultural as well as non-agricultural sectors. While methodological problems persist in analysing changes in rural women's work over time, the dominant trend in the region over the past several decades has been towards the feminization of agriculture.

The growth in women's agricultural wage employment has been concentrated in the non-traditional agro-export sector favoured under neoliberalism: specifically, in the production and packing of fresh vegetables, fruits and flowers for Northern markets, what now constitutes Latin America's leading agricultural export rubric. In many countries women and children make up half or more of the field labour for these crops, while women constitute the vast majority of the workers in the packing houses geared to the export market. Nonetheless, the characteristics of this employment, principally its temporary, seasonal and precarious nature, have made it difficult to capture quantitatively in national censuses and household surveys. The essay analyses the role of gender-segmented labour markets in increasing the demand for female labour, as well as the significance of women's increased participation in wage labour for female empowerment.

There is also evidence, stronger for some countries than others, of a feminization of smallholder production, as growing numbers of rural women become the principal farmers—that is, own-account workers in agriculture. This phenomenon is associated with an increase in the proportion of rural female household heads; male absence from the farm, in turn related to growing male migration and/or employment in off-farm pursuits; and the decreased viability of peasant farming under neoliberalism.

There is little question that the principal factor driving these trends is the need for rural households to diversify their livelihoods. The combination of growing land shortage, economic crises and unfavourable policies for domestic agriculture has meant that peasant households can no longer sustain themselves on the basis of agricultural production alone. The response to the crisis of peasant agriculture has been an increase in the number of rural household members pursuing off-farm activities. Whether these are male, female, or include both genders, depends on a myriad of factors, with household composition and the stage of the domestic cycle, and the dynamism and gendered nature of local, regional and international labour markets, being among the most important.

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#### RÉSUMÉ

Les ménages ruraux ne cessent de diversifier leurs stratégies de création de revenus. Cette diversification, l'augmentation du nombre des membres du ménage cherchant un emploi hors de l'exploitation familiale et des femmes rurales travaillant à leur compte ou comme salariées dans l'agriculture et d'autres secteurs sont parmi les principales tendances associées à la crise économique, à la restructuration néolibérale et à la montée des taux de pauvreté dans les zones rurales d'Amérique latine. Bien qu'il soit toujours difficile, du fait de problèmes méthodologiques, d'analyser l'évolution du travail des femmes rurales sur une certaine durée, la tendance qui domine dans la région depuis plusieurs décennies est celle de la féminisation de l'agriculture.

Les emplois salariés féminins dans l'agriculture se sont surtout développés dans le secteur des exportations agricoles non traditionnelles que privilégie le néolibéralisme: en particulier dans la production et le conditionnement des produits frais—légumes, fruits et fleurs—pour les marchés du Nord, qui sont actuellement les principales exportations agricoles de l'Amérique latine. Dans bien des pays, les femmes et les enfants représentent la moitié, sinon plus, de la main-d'œuvre employée aux champs pour ces cultures, et la grande majorité des employés affectés au conditionnement pour les marchés d'exportation sont des femmes. Cependant, du fait de la nature de ces emplois, surtout de leur caractère temporaire et saisonnier et de leur précarité, il est difficile d'en évaluer le nombre à partir des recensements nationaux et des enquêtes auprès des ménages. Dans cet essai, l'auteur analyse dans quelle mesure les marchés du travail segmentés par sexe contribuent à faire augmenter la demande de main-d'œuvre féminine, et se demande quelle importance revêt l'activité salariée, en augmentation chez les femmes, pour leur autonomisation.

Des éléments portent également à croire, plus nombreux d'ailleurs pour certains pays que pour d'autres, à une féminisation des petits producteurs car les femmes rurales sont de plus en plus nombreuses à diriger l'exploitation familiale, c'est-à-dire à travailler à leur propre compte dans l'agriculture. Ce phénomène est associé à une augmentation de la proportion des femmes rurales chefs de famille, à l'absence des hommes des exploitations agricoles, elle-même liée à une migration croissante des hommes et/ou à leur emploi dans des secteurs autres que l'agriculture et à la moindre viabilité des exploitations agricoles paysannes en régime néolibéral.

Il n'est guère contestable que le moteur principal de ces tendances n'est autre que le besoin pour les ménages ruraux de diversifier leurs moyens d'existence. Avec la pénurie croissante de terres, conjuguée aux crises économiques et à des politiques défavorables à l'agriculture nationale, les ménages paysans ne peuvent plus vivre de leur seule production agricole. L'augmentation du nombre des membres du ménage cherchant un emploi hors de la ferme a été une façon de répondre à la crise. Ces emplois peuvent être féminins, masculins ou ouverts aux deux sexes; cela dépend d'une multitude de facteurs, dont les plus importants sont sans doute la composition du ménage et le stade du cycle familial, le dynamisme du marché du travail local, régional et international et son attitude envers chacun des deux sexes.

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#### **RESUMEN**

Las principales tendencias asociadas con la crisis económica, la reestructuración neoliberal y el aumento de las tasas de pobreza rural en Latinoamérica incluyen una diversificación constante de las estrategias de generación de ingresos de los hogares rurales, un incremento en el número de miembros de esos hogares que buscan empleo fuera de la finca, y la creciente participación de las mujeres de las áreas rurales como trabajadoras tanto por cuenta propia como asalariadas en el sector agrícola y en otros sectores. Si bien persisten problemas metodológicos al analizar los cambios en el trabajo de las mujeres de las áreas rurales con el transcurso del tiempo, la tendencia dominante en la región en los últimos decenios ha sido la feminización de la agricultura.

El crecimiento del empleo remunerado de las mujeres en el sector agrícola se ha concentrado en el sector de exportación agrícola no-tradicional—sector favorecido por el neoliberalismo—, concretamente en la producción y el envasado de verduras, frutas y flores frescas para los mercados del Norte, lo que actualmente constituye la rama principal de exportación agrícola de Latinoamérica. En muchos países, las mujeres y los niños representan al menos la mitad de la mano de obra para estos cultivos, mientras que las mujeres constituyen la gran mayoría de los trabajadores en las envasadoras orientadas a la exportación. Sin embargo, las características de este empleo, principalmente su naturaleza temporal, estacional y precaria, han dificultado su captación cuantitativa en los censos nacionales y en las encuestas por hogares. En este ensayo se analiza el papel que desempeñan los mercados de trabajo segmentados por género en el incremento de la demanda de mano de obra femenina, y la importancia que reviste para el empoderamiento de las mujeres su creciente participación en el empleo remunerado.

También se ha comprobado, en algunos países más que en otros, que la producción parcelaria ha experimentado una feminización, ya que cada vez más mujeres rurales se convierten en las agricultoras principales—es decir, en trabajadoras por cuenta propia del sector agrícola. Este fenómeno se asocia con el aumento del número de familias encabezadas por mujeres; con la ausencia de mano de obra masculina en el sector agrícola, a su vez relacionada con la creciente migración y/o empleo de los hombres en actividades no agrícolas; y con la viabilidad cada vez menor de la agricultura familiar en el marco del neoliberalismo.

Es evidente que el principal factor que impulsa estas tendencias es la necesidad que tienen los hogares rurales de diversificar sus fuentes de subsistencia. La escasez creciente de tierras, las crisis económicas y las políticas desfavorables para la agricultura familiar constituyen una combinación de factores que han conducido a que los hogares campesinos ya no puedan sustentarse únicamente a través de la producción agrícola. La respuesta a la crisis de la agricultura familiar ha sido el aumento del número de miembros de los hogares que buscan un empleo fuera de la finca. Que éstos sean hombres, mujeres, o ambos, depende de muchos factores; entre los más importantes destacan la composición del hogar y la fase del ciclo familiar, así como el dinamismo y las características de genero de los mercados de trabajo locales, regionales e internacionales.

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I.

## introduction

The dominant trends in rural Latin America since the 1970s include the continued diversification of rural household livelihood strategies; a notable increase in rural women's measured economic participation rates; a reported concentration of active rural women in non-

agricultural activities; and the growing visibility of women, both rural and urban, in agricultural production. This essay considers whether the process of economic restructuring, induced by the combined effect of economic crises, neoliberal policies and globalization over the past several decades, has led to a process of feminization of agriculture. Further, is the feminization of the agricultural sector consistent with the reported concentration of active rural women in non-agricultural activities?

In this essay I argue that there is clear evidence of an increase in women's participation as agricultural wage workers. This growth has been concentrated in the non-traditional agro-export sector favoured under neoliberalism, and specifically in the production and packing of fresh vegetables, fruits and flowers for northern markets, which now constitutes Latin America's leading agricultural export rubric. In many countries women and children make up half or more of the field labour for these crops, while women constitute the vast majority of the workers in the packing houses geared to the export market. Nonetheless, the characteristics of this employment, principally its temporary, seasonal and precarious nature, have made it difficult to capture quantitatively in national censuses and household surveys.

There is also evidence, stronger for some countries than others, of a feminization of smallholder or peasant production, as growing numbers of rural women become the principal farmers, that is, own-account workers in agriculture. This phenomenon is associated with an increase in the proportion of female household heads in rural areas, as well as male absence from the farm, which is in turn related to growing male migration and/or employment in off-farm pursuits.

There is little doubt that the principal factor driving these trends is the need for rural households to diversify their livelihoods. The combination of growing land shortage (itself a product of the extreme concentration of land in Latin America), economic crises and unfavourable policies for domestic agriculture under neoliberalism has meant that peasant households can no longer sustain themselves on the basis of agricultural production alone. Moreover, rural poverty rates remain grossly high. In many regions the response to the crisis of peasant agriculture has been an increase in the number of rural household members pursuing off-farm activities. Whether these are male, female or include both genders depends on a myriad of factors, with household composition and the stage of the domestic cycle, and the dynamism and gendered nature of local, regional and international labour markets, being among the most important.

Latin America is a vast, heterogeneous region. This analysis focuses on the main trends in 18 Spanish and Portuguese-speaking countries. Where possible, I draw on comparative data, supplemented by the rich case study literature. My coverage of the dominant processes in each country, however, is uneven, largely reflecting the state of the literature. Moreover, on the basis of case studies it is difficult to generalize about the dominant process in a given country, let alone the region. The case study material presented should thus be taken as examples of some of the important trends, rather than as conclusive evidence of a generalized Latin American pattern.

<sup>1</sup> I draw heavily on data published by CEPAL (the UN Economic Commission for Latin America and the Caribbean). Most of their data for Latin America includes 19 countries; I have excluded Cuba from this analysis since its development process is unique.

The essay is organized as follows. The second section summarizes in broad strokes the main trends in Latin America with respect to the content and impact of neoliberal economic policies, highlighting the increase in poverty rates and their gendered impact with respect to rural economic activity rates, migration and household headship. The third section focuses on rural livelihoods, and summarizes the available survey data on the diversification of household incomes. The fourth section considers the methodological problems in analysing changes in rural women's work over time, and tackles the puzzle of whether the trend towards the feminization of agriculture is compatible with the reported concentration of rural women in non-agricultural activities. The fifth section focuses on agricultural labour markets as gendered institutions, and attempts to establish what exactly is new about women's participation in the labour market for non-traditional agro-export production. The role of gendersegmented labour markets and the emphasis on flexibilization of production in increasing the demand for female labour are analysed, as is the evidence regarding the significance of women's increased participation in wage labour for female empowerment. The sixth section considers the viability of peasant farming under neoliberalism and the processes that have contributed to the feminization of peasant agriculture. It also reviews the evidence on the mixed impact of non-traditional agro-export production on peasant agriculture and the women within it. Section VII focuses on rural women's access to land and other resources, and the difficulties they face in becoming viable farmers. The final section offers some tentative conclusions.

Π.

# neoliberalism and poverty in rural latin america

During the 1980s Latin American governments and the international financial institutions reached an extraordinary consensus around the virtues of neoliberalism. The state-driven policies associated with import substitution industrialization (ISI) were abandoned in favour of free markets and open economies. Facing daunting debt service payments and large current account deficits, Latin American countries adopted stabilization programmes in

order to bring about macroeconomic balance. These aimed to reduce the domestic fiscal deficit, establish equilibrium in the balance of payments, and reduce inflation while allowing for debt repayment. Structural adjustment was to establish the conditions for long-run growth by moving toward a free market economy which favoured tradeables at the expense of non-tradeables in an overall context of liberalization of trade regimes.<sup>2</sup>

It was argued that the agricultural sector had suffered most under the ISI policies of previous decades, given its reliance on cheap food policies and neglect of exports. Market-determined prices under neoliberalism were expected to improve the terms of trade for agriculture, while consolidation of the exchange rate, in concert with devaluation, was expected to benefit agricultural exports. The latter were also expected to benefit from trade reform via the elimination of export taxes and lower tariffs on inputs. Reduction of the fiscal deficit, however, meant that the agricultural sector stood to lose from reduced public investment, an end to subsidized agricultural credit and a reduced volume of resources as a result of the privatization and closing of state agricultural banks. The reduction in the size of the state usually included a dismembering of a number of other state enterprises and activities that serviced the agricultural sector, such as state marketing and irrigation boards, extension services, and the provision of technical assistance.

Some of these policies were expected to have contradictory short-run effects. For example, while devaluation should improve the competitive position of agricultural exports in external markets, to the extent that this sector also depended on imported inputs, devaluation could also increase costs. Moreover, the end of food subsidies, with their pro-urban bias, might increase agricultural prices in favour of farmers, but the supply response of farmers also depended on the outcome of changes in their costs of production, public investment, and other structural factors (Rao and Caballero 1990).

Moreover, neoliberal agricultural policies were expected to have differential effects on different groups of agricultural producers, depending on whether they produced export crops or domestic foodstuffs, the degree of international competition that they faced, and the extent to which they had previously relied on government subsidies and services. To the extent that these policies affected small and large farmers differently, they could be expected to have substantial distributionary consequences, generally thought to favour the latter over the former (Carter and Barham 1996).

<sup>2</sup> For the formal logic behind stabilization and structural adjustment policies see Corbo and Fischer (1995).

The specific timing and manner in which reform and institutional change were fostered varied considerably across the region. In the mid-to-late 1980s, for example, the only countries that had significantly liberalized their trade regimes were Chile, Bolivia and Mexico. Colombia and Costa Rica were considered moderate reformers while Argentina, Brazil and Peru had yet to enact fundamental trade reforms (Weeks 1995). A decade later almost all countries had undergone trade liberalization, with Argentina, Bolivia, Chile and Peru considered among the highly liberal regimes and Brazil, Colombia, Costa Rica and Mexico among the moderate reformers (Spoor 2002: table 1). Overall, by the early 1990s average tariffs on food imports had been lowered to around 10 per cent. The countries of the region also differed in the pace of fiscal reform. In some, such as Chile and Mexico, fiscal reform accompanied changes in the trade regime, while in others these reforms lagged considerably behind the pace of liberalization measures. With the exception of Chile, in most countries it was not until the 1990s that substantial institutional reforms were instituted.

As Michael Carter and Brad Barham (1996:1) argue, the aim of neoliberalism was to get "prices and institutions right". For a number of Latin American countries this meant the undoing of the agrarian reforms of previous decades. New agrarian laws were passed that brought a formal end to state intervention in land expropriation and distribution for purposes of social justice. The neoliberal model has favoured privatization and individual land rights, because these are considered to be more conducive to profit-maximizing behaviour and hence, greater efficiency. Thus state farms have been privatized and support has been withdrawn from production cooperatives and other group farming activities favoured under the previous model. Collectively-held properties have usually been divided up among the beneficiaries, and once the agrarian debt is paid these may be sold. In some countries, such as Mexico and Peru, the move towards privatization has included the land previously held collectively by indigenous and peasant communities. In other countries, such as Bolivia and Ecuador, in response to the mobilization of the indigenous movement, collective property rights have been guaranteed under the new agrarian legislation and even furthered through the recognition of historic indigenous land claims.

In most countries privatization of land rights has been accompanied by land titling programmes designed to enhance security of land tenure, promote investment and rejuvenate the land market. These efforts have focused primarily on the new landowners emerging from the previous reformed sector, but have also included the large sector of smallholders characterized by insecurity of tenure or lack of formal land titles. In a number of countries the new role of the state in land distribution is to assist market-based land transactions. The range of activities now considered proper for the state includes land banks of various types as well as state support to direct negotiations among buyers and sellers in the land market, or "negotiated" land reforms.

<sup>3</sup> In the mid-1980s the average level of tariffs on food imports was roughly 55 per cent in Brazil, 35 per cent in Colombia, 20 per cent in Argentina, Bolivia and Chile, and 15 per cent in Mexico. In the late 1980s this average level dropped substantially in Brazil and there was some reduction in Bolivia, Chile and Mexico. The most drastic reduction in the level of protection occurred from 1991 to 1993, when tariffs on food imports dropped to 5 per cent in Argentina and by a significant amount in Bolivia, Brazil, Chile and Colombia (Spoor 2002: figure 1).

<sup>4</sup> The heterogeneous content of the reforms and their implications for the agricultural sector are emphasized in the detailed CEPAL analysis of the experience of seven countries, summarized by Tejo (2001).

<sup>5</sup> Agrarian reform efforts have now officially come to a close in Chile, Ecuador, El Salvador, Honduras, Mexico, Nicaragua and Peru. These continued into the 1990s in concert with neoliberal programs in Nicaragua and El Salvador as part of post-conflict reconstruction, but the reforms have since ended. See Deere and León (2001) for the different country experiences.

In terms of outcomes, only in the first half of the 1990s did the Latin American agricultural sector as a whole achieve an average annual rate of growth, 3.1 per cent, approximating that of the ISI period. Max Spoor (2002) argues that the problems of agriculture under ISI were exaggerated. While there was undoubtedly price discrimination against tradeables (due to an overvalued exchange rate and export taxes), this was compensated for by a positive resource transfer into the sector via public investment, subsidized credit and agricultural services. Latin American agricultural exports also grew at relatively high rates during the 1970s, casting doubt on the severity of anti-export bias under ISI. The agricultural sector grew at an average annual rate of 3.4 per cent (1970–75) and 3.6 per cent (1975–79) and even maintained momentum during the crisis-ridden early 1980s, with a 2.7 per cent average annual growth rate (1980–85). The most drastic decrease for the sector was in the late 1980s, when growth was reduced to an average 1.3 per cent (1985–90) as a result of the combined effect of the reduction of state support and the decline in international prices for traditional agro-exports. The annual average growth rate for 1990–98 was only 2.6 per cent, much below the 1970s average of 3.5 per cent (David et al. 2001: table 1).

Spoor argues that the reforms of the late 1980s and 1990s did not necessarily lead to a significant shift from the pre-existing trend of agricultural output. That is, neoliberal policies have done no better (and for some countries worse) than the long-run growth path of the agricultural sector. Such policies, however, have significantly increased labour productivity and generated a positive agricultural trade balance (David et al. 2001; García Pascual 2003). While the share of agriculture in gross domestic product (GDP) has continued to fall, to a regional average (for 32 countries of Latin America and the Caribbean) of 7.5 per cent in 2001, the agricultural sector continues to generate over one-third of the value of total exports in a number of countries: specifically Argentina, Uruguay, Paraguay and the Central American republics.<sup>7</sup>

The implementation of neoliberal policies has come at a very high cost, exacerbating social and economic inequalities while increasing the vulnerability of the agricultural sector and of Latin American economies. A recent study for the Comisión Económica para América Latina y el Caribe (CEPAL) emphasizes how the reforms have accentuated the already strong differentiation that existed in Latin America between regions, producers, and dynamic and traditional products (David et al. 2001). With respect to the latter, the most dynamic growth sectors have been non-traditional exports such as oil seeds, livestock, vegetables and fruit. As table 1 shows, those in decline include traditional exports such as coffee, sugar and cotton, as well as roots and tubers and, to a lesser degree, cereals.

<sup>6</sup> The growth rate of GDP during these periods was 1970–75, 5.9 per cent; 1975–80, 5.5 per cent; 1980–85, 0.3 per cent; 1985–90, 1.6 per cent; and 1990–95, 3.3 per cent (Spoor 2002: table 2).

<sup>7</sup> Mexico is an outlier, with the agricultural sector in 2001 producing only 4.3 per cent of GDP and 5 per cent of total exports. In Brazil, in contrast, the agricultural sector accounts for 8.6 per cent of GDP and 27.6 per cent of total exports (Dirven 2004: table 5). These two countries account for half of the economically active rural population of 50.5 million of Latin America and the Caribbean in 2000, with Brazil's rural EAP being almost twice as large (16.5 million) as Mexico's (8.9 million) (David et al 2001: table 9).

TABLE 1 THE EVOLUTION OF AGRICULTURAL PRODUCTION IN LATIN AMERICA (1970 = 100)								
	1975-1980	1995-1999						
Oilseeds	189	501						
Livestock	127	242						
Vegetables	120	211						
Fruits	116	202						
Cereals	114	176						
Roots and tubers	96	105						
Coffee	102	129						
Sugar cane	149	197						

in terms of the preponderance of traditional versus non-traditional products, with this factor accounting in large measure for the performance of the agricultural sector. Among the countries with the highest agricultural growth rates in the 1990s have been Argentina, Chile and Uruguay, all with growth rates exceeding an average annual 4 per cent. Brazil is near the Latin American mean, at 2.8 per cent, while Mexico has had one of the lowest growth rates in the region, only 1.3 per cent between 1990–98 (David et al. 2001: table 1).

Latin American countries can thus be differentiated

Source: David et al. (2001: Table 1).

GROWTH IN AGRICULTURAL	TABLE SECTOR EXPORTS AND IMPOR	2 TS, LATIN AMERICA AND THE CAR	IBBEAN, 1979–2001
	Percent change value of exports	Percent change value of imports	Trade balance in 2001 (US\$ billion)
Agriculture, forestry and agro-industry	95.1	200.4	21.6
ishing	278.7	305.3	5.0
All agricultural sector	105.2	203.9	26.6
Selected rubrics:			
Milk and dairy products	816.9	219.6	-1.3
orestry and forest products	434.7	292.6	-0.9
ruits and vegetables	387.0	222.4	5.9
Dil seeds	301.3	365.4	2.9
Meat and processed meat	143.1	340.1	1.2
Cereals and processed foods	135.7	136.1	-2.9
Animal and vegetable oils	121.7	77.4	1.1
Rice	97.2	33.4	-0.3
Beans .	55.3	158.4	-0.1
ive animals	40.0	-8.7	0.2
bugar	-25.3	109.2	3.6
Cacao, tea and spices	-33.6	270.4	0.6
extile fibres and cotton	-43.0	752.3	-1.0
Coffee	-50.4	-77.1	3.4

Source: García Pascual (2003: Table 1), based on FAOSTAT for 43 countries and territories

In the 1990s oil seed production, particularly of soya, has spurred growth in Argentina, Bolivia, Brazil and Paraguay, while African palm production has done so in Honduras, Guatemala and Costa Rica. The most spectacular growth in fruit and vegetable production, in decreasing order, has been in Mexico, Chile, Argentina, Brazil and Costa Rica. Forestry production has grown most rapidly in Chile, Argentina, Uruguay and Honduras, whereas livestock has done so in Brazil, Mexico and Chile (David et al. 2001: table 1). Production of all of these rubrics has been spurred by relatively favourable international prices for these exports, in contrast to traditional agricultural exports.<sup>8</sup>

The downside of globalization is found in Latin America's rising share of agricultural imports. As table 2 shows, the growth in the value of total agricultural imports (including fishing and forestry as well as agro-industrial products) between 1979 and 2001 has been almost twice that of exports. Among the main items in which the region experienced a trade deficit in 2001 were those crucial to food sovereignty: beans, rice, cereals, milk and dairy products as well as textile fibres.

The most dynamic products of the 1990s are those produced by the most modern and capitalized farmers with links to agro-industry and export markets, and by international agribusiness. Those in decline are largely produced by small farmers and in some countries, national capital. According to a recent CEPAL study, the reforms have sharpened the differences between those with and without access to input and product markets. For example, the reduced availability of credit and its rising cost, combined with the need to pay for agricultural services and other factors, have raised the minimum rate of return necessary for a farm to be profitable and led to even greater differences between these two groups with respect to the degree of technification and mechanization, and hence productivity and incomes. The substitution of market mechanisms for the institutions of the state has meant the elimination of state support for precisely those regions, products and producers that are less competitive but crucial to fighting rural poverty (David et al. 2001).

The most dramatic impact of the "lost decade" of GDP growth in Latin America was in terms of poverty rates. As table 3 shows, during the crisis-ridden 1980s the overall incidence of poverty increased from 41 to 48 per cent of all households. The incidence of poverty and indigence has always been considerably higher in rural than in urban areas, but during the economic crisis the increase was steeper in urban areas. By 1990 the majority of the

		TABLE 3			
INCIDENCE OF	<b>POVERTY</b>	AND IND	IGENCE, L	ATIN AME	RICA,
1980-2002	(IN PERC	ENTAGES	OF THE PC	OPULATION	<b>4</b> )

		Poor			Indigent	
Year	Total	Urban	Rural	Total	Urban	Rural
1980	40.5	29.8	59.9	18.6	10.6	32.7
1990	48.3	41.4	65.4	22.5	15.3	40.4
1999	43.8	37.1	63.7	18.5	11.9	38.3
2002*	44.0	38.4	61.8	19.4	13.5	37.9

Source: Dirven (2004: Table 2), based on CEPAL household surveys

Note: \*preliminary figures

200 million poor households in Latin America were living in urban areas, although the number of rural indigents continued to exceed those in the cities. During the 1990s the incidence of poverty and indigence was on the decline, but at the end of the decade these indices again began to increase, so that Latin America entered the new millennium with a higher share of its population in poverty and indigence than in 1980.

<sup>8</sup> Between 1979 and 2000, the price of coffee exports fell 62.5 per cent; that of sugar, 28.6; animal and vegetable oils, 48.5; cacao, 42; oil seeds 36.5; and textile fibres and cotton, 29.2 per cent (García Pascual 2003: table 2).

Among the factors accounting for the high incidence of rural poverty in Latin America is the extremely unequal distribution of land. The region has the highest degree of land concentration in the world (Ferranti et al. 2004).° Over the 1990s land might have become even more unequally distributed, as the number of small farms in existence decreased in countries such as Brazil, Chile, Uruguay, Argentina, Bolivia, Colombia and Mexico (David et al. 2001). In a number of countries a very large proportion of those whose primary activity is agriculture continue to live below the poverty line.10 It has been estimated that approximately two-thirds of the rural poor are smallholders, 30 per cent are landless and the remainder are indigenous and other groups (David et al. 2001). The incidence of poverty in the 1990s was thus concentrated among own-account and unpaid family workers in agriculture, and linked to the distress of agricultural production for the internal market under neoliberalism.

## gender dimensions of the economic crisis

There is a large literature indicating that stabilization and structural adjustment policies are not gender-neutral. Since men and women have different roles in production and reproduction, policies affect them differently. One of the main consequences of neoliberal policies has been to trans-

fer the costs of reproduction of the labour force from the state to households, and often to the women within them, both because of their primary responsibility for domestic labour and because the crisis has required their growing participation in the labour force.11

Reductions in state spending on health, education, transportation, utilities and food subsidies have all increased the burden of domestic labour, principally by increasing the time that women must dedicate to caring and providing for their families.12 At the same time, the higher cost of basic reproduction provoked by the withdrawal of the state, combined with higher male unemployment rates, the informalization of labour, and declining real wages, have provided powerful incentives for women to increase their labour force participation, lengthening their double day. The measured female share of the labour force rose from 18 to 26 per cent between 1950 and 1980, reaching 34 per cent by 1990. In 1999 in eight out of 18 Latin American countries women represented over one-third of the labour force (Chant 2003:204–5).

Overall, the impact of the crisis and neoliberal policies on rural women in Latin America has been less studied than that on urban women. One of the few national-level studies of the impact of the debt crisis and structural adjustment policies on rural women, by Rosario Robles (2000) for Mexico, argues that the impact has been even more severe upon rural women than urban women in that country. This is partly because the rural population was so much poorer to begin with, but also because the crisis has affected rural women both in their reproductive role and

Ferranti et al. (2004: table 9.4) report the regional Gini coefficient average of operational holdings to be in the range of 0.74 (1980s) to 0.81 (1950–94), compared with 0.67 and 0.56 for the Middle East and Northern Africa, the region with the next highest concentration of land. According to CEPAL, the countries with the highest Gini coefficients of land concentration (0.90 and above) are Chile, Mexico and Paraguay. Those in the second grouping (0.80-0.90) include Argentina, Brazil, Costa Rica, El Salvador, Panama, Peru and Venezuela. The countries that appear as having only a moderate degree of concentration of land (those with Ginis in the 0.66-0.80 range) include Colombia, Jamaica, the Dominican Republic, Uruguay and Honduras (David et al. 2001: table 16).

<sup>10</sup> For example, 90 per cent of those employed in agriculture are considered poor in Bolivia, 73 per cent in Peru, 66 per cent in Paraguay and 64 per cent in Brazil (Dirven 2004: table 8).

<sup>11</sup> Deere et al. 1990; Elson 1991; Benería and Feldman 1992; Razavi 2002.

<sup>12</sup> As Diane Elson (1991) has argued, adjustment policies assume that women's time is perfectly elastic.

as food producers and income earners, greatly intensifying their work. That the impact on rural women has been dramatic is suggested by the increased organization and mobilization of rural women and their growing visibility in protests throughout the region against neoliberal policies, the World Trade Organization and the Free Trade Area of the Americas (FTAA).<sup>13</sup>

While rural women's measured labour force participation rate has always been lower than that of urban women, the available data support the conclusion that a primary impact of economic restructuring has been to increase their participation rate, along with that of urban women. The increase in rural women's economic activity rates must be located in the context of rural sex ratios. One of the main characteristics of Latin America in 2000, as in 1970, is that rural sex ratios are biased toward men, with the regional average for 19 countries being 93 women to every 100 men. There are significant country differences, however, with rural sex ratios ranging from 74 in Uruguay to parity (100) in Mexico since 1995 (Katz 2003: table 1). The rural sex ratio in favour of men is primarily due to the fact that women in Latin America have tended to migrate both internally and internationally in far greater numbers.

As table 4 shows, in the 1960s 56 per cent of the internal migrant stream was composed of women, with women dominating in every single country for which data is available. <sup>14</sup> The feminization of internal migration during the ISI period was largely due to the growing demand for domestic servants among the expanding middle class. This trend was supported by the unequal opportunities for young people in rural areas, with land inheritance favouring sons over daughters since only men were expected to become agriculturalists (Crummett 1987).

By the 1970s the gender gap in internal migration rates had been reduced considerably in a number of countries, principally by an increase in the male migration rate, so that the female share of internal migrants was only 53 per cent (table 4). While complete data by gender is not available for the 1980s, in some countries, such as Chile, internal migration became more balanced as growing employment opportunities opened up for women in rural areas and male livelihoods in

FEMALE SHARE SELECTED L			
Country	1960s	1970s	1980s
Argentina	53	53	
Brazil	52	51	
Chile	52	54	49
Colombia	67	52	
Dominican Republic	54	55	
Ecuador	56	50	
Guatemala	58	46	
Mexico	52	51	
Panama	55	58	50
Paraguay	60	52	
Peru	51	51	
Venezuela	58	53	51
Latin America regional	56	53	

Source: Katz (2003: Table 9)

rural areas came under stress. Overall, during the crisis-ridden 1980s, rural—urban migration in Latin America continued to grow but at a decreasing rate; the share of the urban population increased from 65 per cent in 1980 to 71 per cent in 1990. Internal migration has since slowed, with natural population growth within urban areas

<sup>13</sup> On the growth of rural women's organization in the 1980s and 1990s, see Deere and León (2001: chpt. 4). On the participation of women and of women's organizations in the regional (Coordinacion Latinoamericana de Organizaciones del Campo (CLOC)) and international peasant movement (Via Campesina), see Deere (2001). An excellent case study of the mobilization of rural women in support of family farming and against neoliberal policies in Argentina is provided by Giarracca and Teubal (2001).

<sup>14</sup> The Central American countries have not been included in table 4 since data is only available for the 1960s. Katz (2003: table 9) shows that in this period the female share of internal migrants ranged from 54 per cent in Costa Rica to 60 per cent in El Salvador.

now significantly exceeding the population growth as a result of rural—urban migration (Katz 2003). By 2000 75 per cent of Latin America's population was urban (David et al. 2001: table 8).

In 1970 women dominated not only internal ruralurban migration, but also intraregional and international migration. Only intrarural migration—principally of seasonal agricultural workers—was male-dominated. In the 1990s women continued to predominate in intraregional migration in Latin America, with 105 women migrating for every 100 men (Katz 2003:13), with significant differences by country depending on whether the pull was from the service sector (women migrating to wealthier neighbouring countries to engage in domestic labour, such as from Nicaragua to Costa Rica), or the agricultural sector (with men dominating among seasonal migrants, for example from Bolivia to Argentina).

With respect to international migration, in 1970 Mexican migration to the United States was roughly gender balanced, with 96 men living in the United States who had been born in Mexico for every 100 women. By 1980 this figure stood at 111 men to 100 women, and the tendency towards the masculinization of migration to the United States continued until 1990, when it reached 123 men for every 100 women. Since then female migration has grown more rapidly than that of males, so that in 2000 there were 118 men to 100 women (Katz 2003: table 10).15

With the exception of El Salvador, migration from Central America was largely female-dominated until 2000. In that year there were 113 men who had been born in Central America in the United States for every 100 women. Only migration from South America remains female-dominated, with 92 men to 100 women in 2000 (Katz 2003: table 10). Another important change since the 1990s has been growing female participation in intrarural migration, which is linked to women's growing participation in seasonal agricultural wage labour, a tendency discussed in greater detail in Section V.

		TABLE 5		
RURAL	<b>ECONOM</b>	IC ACTIVIT	TY RATES E	SY SEX,
LATIN A	MERICA 19	80-2000	(IN PERCE	NTAGES

		1980	1990	2000
Argentina	Male	75.5	70.1	70.4
	Female	14.1	32.4	33.9
Bolivia	Male	78.4	77.4	77.0
	Female	20.9	29.2	32.3
Brazil	Male	83.8	83.5	82.3
	Female	31.3	36.1	39.4
Chile	Male	69.0	75.9	75.2
	Female	8.9	13.6	18.4
Colombia	Male	70.5	69.3	69.2
	Female	21.4	28.9	32.4
Costa Rica	Male	77.8	78.6	77.7
	Female	12.5	16.5	21.1
Dominican Rep.	Male	74.8	76.1	76.4
	Female	21.4	25.7	29.7
Ecuador	Male	73.3	74.6	76.2
	Female	10.4	18.1	22.7
El Salvador	Male	78.8	73.4	75.6
	Female	13.5	14.1	19.7
Guatemala	Male	74.0	72.8	72.9
	Female	6.2	11.2	16.5
Honduras	Male	81.4	82.3	80.7
	Female	8.0	11.0	16.3
Mexico	Male	75.6	76.1	76.6
	Female	16.1	20.2	24.2
Nicaragua	Male	77.5	<i>7</i> 8.3	79.4
	Female	18.5	24.0	27.0
Panama	Male	66.4	71.3	71.8
	Female	12.6	16.6	21.5
Paraguay	Male	78.7	77.4	76.3
	Female	10.9	8.4	8.2
Peru	Male	74.0	76.2	77.3
	Female	30.8	34.9	38.1
Uruguay	Male	76.7	<i>77</i> .1	75.5
	Female	24.8	33.3	35.9
Venezuela	Male	68.6	69.0	68.7
	Female	9.9	11.7	16.7
Total Latin America	Male	75.3	75.5	75.5
	Female	16.2	21.4	25.2

Source: Centro Latinoamericano y Caribeño de Demografia (CELADE)/CEPAL, Bulletin No. 70, July 2002: Table 5c Note: Refers to people aged 10 years and over.

<sup>15</sup> These figures probably refer only to legal migration since they are based on US Census figures. Other sources suggest that the migration of Mexican women to the United States, legal or illegal, has always been much less than that of men, and only increased substantially over the decade of the 1990s. According to Robles (2000), women in the late 1990s made up approximately 20 per cent of the migrant stream. For a detailed analysis of the gendered patterns of migration (but without quantitative data) see Lawson (1998).

One of the most striking differences by gender is the trend in measured rural economic activity rates. As table 5 shows, while the male economic activity rate for Latin America (unweighted average) stagnated at around 76 per cent between 1980 and 2000, that of rural women increased from 16 to 25 per cent. Every country but Paraguay reported an increase in the rural female activity rate, and in five countries (Argentina, Chile, Ecuador, Guatemala and Honduras) this rate more than doubled. The highest rural activity rates are for Brazil, where in 2000 82 per cent of men and 39 per cent of women above the age of 10 were economically active. The female share of the rural economically active population in Latin America thus reached 26 per cent in 2000, up from 21 per cent in 1980 (Katz 2003: table 3). These figures lend support to the argument that one of the principal consequences of neoliberal policies has been the growing labour force participation of rural women, linked to the need for rural households to increasingly augment and diversify their sources of livelihood.

Another important trend of the past several decades has been an increase in female-headed and female-maintained households. As table 6 shows, in all countries for which CEPAL reports data, the proportion of both in the late 1990s tends to be greater in urban than in rural areas. The proportion of female-maintained households (where a woman is the primary contributor) tends to exceed the proportion of self-reported female-headed households. The share of the latter ranges from a low of 13 per cent in Brazil to a high of 25 per cent in El Salvador, but these figures may underestimate the share of *de facto* female headship.

TABLE 6 FEMALE HOUSEHOLD HEADSHIP IN LATIN AMERICA, 1999 (BY PERCENTAGE OF HOUSEHOLDS)									
	ι	JRBAN	F	RURAL					
	Self-reported	Primary contributor	Self-reported	Primary contributor					
Bolivia	20	28	16	23					
Brazil	25	33	13	23					
Chile	24	28	15	18					
Colombia	29	35	19	22					
Costa Rica	28	30	19	20					
Dominican Republic	31	32	19	20					
El Salvador	31	38	25	38					
Guatemala	24	30	18	20					
Honduras	30	36	21	22					
Mexico	19	27	16	24					
Nicaragua	35	35	19	21					
Panama	27	30	21	21					
Paraguay	27	33	20	25					

Source: Katz (2003: Table 8), based on CEPAL data

According to a study of female food producers in Central America, the share of female-headed households tends to be under-reported, with the authors' surveys yielding a range from 27 per cent (in Panama) to 47–48 per cent (in El Salvador and Guatemala) (Chiriboga et al. 1996:24). Among the sources of under-enumeration of female-

<sup>16</sup> The hypothesis that this increase is primarily due to a previous underestimation of the economic activity rate of rural women is explored in section IV.

<sup>17</sup> It is not clear, however, if these figures refer to the unweighted or weighted regional average. As will be shown subsequently, these two measures differ primarily because of the weight of Brazil in any weighted regional average.

headed households is the phenomenon of "nesting", whereby female-headed or maintained families reside within larger households (such as a mother's parental home). Another is that given the high prevalence of consensual unions in Central America, the most stable unit is often that of a mother and her children, irrespective of whether a man resides in the household (Katz 2003). The cultural tendency to declare a man as the head if he is present would thus tend to understate the "true" share of female household heads, and partly account for the higher proportion of households that are female-maintained than that declared as female-headed.<sup>18</sup>

There is little doubt that the growing proportion of rural female-headed households reported in most regions is linked to the growing distress of the peasant economy during the last few decades. The need to seek off-farm sources of income has spurred temporary as well as long-distance migration among men, leaving married women as the de facto household heads during their absence. Many rural women become de jure household heads as a result of abandonment—another factor that is reported to be on the rise—when their partner's temporary migration becomes permanent. At the same time there is some evidence that a rising share of rural women are choosing to either remain single (or delay marriage and child-bearing) or opt for separation or divorce. This could be related to a growth in their potential income-generating opportunities. These trends are further developed in the sections below.

# rural livelihoods and the diversification of household incomes

One of the main discoveries in the heyday of agrarian studies in Latin America in the 1970s was that rural households relied on multiple income-generating activities to make a living. The main focus of most studies in that period was on the degree of peasant participation in wage labour.19 A review of the rural household income surveys undertaken in that decade, most of which were local or regional rather than national in scope, revealed that in regions such as southern Bolivia, northern Peru

and central Mexico, off-farm income represented over 50 per cent of net household income, with the bulk of this being generated through wage labour (Deere and Wasserstrom 1981: table 2). In these studies the share of off-farm income was inversely related to farm size, conforming to the thesis of peasant socioeconomic differentiation.<sup>20</sup> Nonetheless, in national surveys in the Dominican Republic, Ecuador, Guatemala and a traditionally peasant area of Colombia, farm income still constituted the bulk (over 70 per cent) of rural household income.

<sup>18</sup> On the other hand, depending on the cultural context, women may declare themselves to be the household head even when they have a male partner if they are landowners or homeowners and their partners/husbands are landless, or if they are older or more educated than their partners. It thus cannot be assumed that self-declared female-headed households are equivalent to those where an adult male is absent. See Deere et al. (2004).

<sup>19</sup> The main debate in Latin America in this period, known as the campesinista/descampesinista debate, was over the future of the peasantry. While the descampesinistas argued that the peasantry was certain to disappear, and projected their future to be that of proletarians, the campesinistas emphasized the factors that led to reproduction of the peasant economy even amidst its impoverishment. By the 1980s it was recognized that participation in multiple income-generating activities could successfully prevent the full proletarianization and disappearance of the peasant economy (Deere 1991).

<sup>20</sup> The thesis of peasant social differentiation developed by V. I. Lenin refers to the tendency with capitalist development for a limited group of peasant households to capitalize on the basis of their use of wage labour, while the majority are forced to sell their labour power for a wage.

These and other household income surveys from the late 1970s were reviewed again by Alain de Janvry, Elizabeth Sadoulet and Linda Wilcox (1989), focusing specifically on the smallholder sector (generally farms less than 5 hectares in size). In 9 out of 11 of these surveys, off-farm income for this sector constituted at least half or more of total household income (Janvry et al.: table 9). Moreover, in all 11 surveys, the bulk of off-farm income was generated through wage labour, with its share being at least twice as large as that generated through other activities.

Little attention was paid in the analysis of household surveys in this period to whether wage employment was obtained in the agricultural or non-agricultural sector, presumably because the majority of wage work was still concentrated in the former. But important transformations were already taking place in the agricultural labour market, primarily the decline of permanent, relative to temporary, employment opportunities. Moreover, by the 1970s in some countries and the 1980s in others, a growing share of the rural economically active population was working in non-agricultural activities. The increased integration of urban and rural labour markets was also made evident in certain countries by the growing proportion of the agricultural economically active population (EAP) that was urban based (Janvry et al.:416–17).

By the end of the 1990s attention shifted in the literature to the important role of non-agricultural activities in rural household income generation, and specifically income from non-agricultural wage employment and self-employment. Thomas Reardon and colleagues (2001:399) reported that in 12 national surveys conducted in the 1990s, rural non-farm income (that is, non-agricultural income)<sup>21</sup> represented 46 per cent of total household income or a weighted (by rural population) 40 per cent.<sup>22</sup> Two main conclusions can be drawn from these recent national surveys with respect to gender. First, in contrast to rural men, who continue to be concentrated in agriculture, economically active rural women are concentrated in non-agricultural activities; and second, there is a marked gender division of labour in the specific sector of non-agricultural employment.

Elizabeth Katz (2003) compiled the most recent CEPAL household survey data for 13 countries (most for 1999), and substantiates these trends.<sup>23</sup> As can be seen in table 7, in 11 of the 13 countries (Bolivia and Brazil being the exception) the majority of active rural women are employed in non-agricultural activities, ranging from 57 per cent (Paraguay) to 92 per cent (Dominican Republic and Panama). The gender differences are striking. With the exception of Bolivia, economically active rural women are much more concentrated in non-agricultural activities than are men. The unweighted means for Latin America for the late 1990s suggest that over two-thirds of economically active rural women are employed in the non-agricultural sector compared with only one-third of rural men. But the weighted mean greatly reduces the share of women in non-agricultural activities, to 51 per cent, given the weight of Brazil in any regional average and the fact that in this country women are still concentrated in the agricultural sector.

<sup>21</sup> The switch in concepts to non-farm rather than off-farm has generated considerable confusion in the literature. Whereas off-farm refers to income generated in activities other than agricultural self-employment, non-farm excludes all agricultural activities including agricultural wage labour. For greater clarity we shall refer to non-farm as non-agricultural.

<sup>22</sup> It is not clear in Reardon et al.'s summary table (table 2), however, whether their definition of non-farm income includes only non-agricultural labour incomes (the sum of non-agricultural wage and self-employment) or includes all non-agricultural income sources; this latter measure should include non-earned income from transfers, remittances and so on. The various studies presented in this journal issue and summarized by Reardon et al. are also not always clear on whether their surveys refer to all rural households or only farm households.

<sup>23</sup> See Reardon et al. (2001: table 1) for the CEPAL estimates of the early and mid-1990s.

Country		Agriculture	Industry	Commerce (a)	Services (b)	Other (
Bolivia	Male	85.6	1.8	1.7	2.8	8.3
	Female	85.7	3.5	6.1	3.5	1.3
Brazil	Male	75.9	5.8	4.3	6.5	7.6
	Female	69.6	3.4	5.3	20.2	1.6
Chile	Male	74.0	4.6	4.9	5.1	11.4
	Female	35.0	6.4	19.9	36.1	2.8
Colombia	Male	69.3	4.2	8.6	8.9	9.1
	Female	23.2	10.2	27.5	36.2	3.0
Costa Rica	Male	42.9	12.7	12.8	11.6	19.9
	Female	9.9	19.5	24.6	42.0	4.0
Dominican Republic	Male	46.6	17.6	13.6	7.6	14.7
	Female	7.6	24.5	30.2	35.4	2.4
El Salvador	Male	64.8	9.3	7.0	6.7	12.2
	Female	13.9	23.2	35.4	26.4	1.0
Guatemala	Male	74.4	8.1	5.9	3.9	7.9
	Female	35.4	24.9	26.1	13.3	0.4
Honduras	Male	77.2	6.2	5.2	5.2	6.3
	Female	12.7	23.2	39.2	24.0	0.9
Mexico	Male	55.4	10.4	9.7	12.4	12.0
	Female	33.0	19.0	21.3	25.7	1.0
Nicaragua	Male	77.7	4.2	6.3	4.6	7.2
	Female	27.6	10.2	28.2	33.7	0.3
Panama	Male	60.0	5.9	11.5	9.3	13.3
	Female	8.1	10.0	29.7	48.4	3.8
Paraguay	Male	71.0	8.3	6.7	5.9	8.1
	Female	42.8	9.3	25.3	21.6	1.0
Latin America (unweight	ted means)					
	Male	67.3	7.6	7.6	7.0	10.6
	Female	31.1	14.4	24.5	28.2	1.8
Latin America (weighted	means) <sup>(d)</sup>					
	Male	67.4	7.3	7.1	8.8	9.4
	Female	48.9	10.4	15.3	23.9	1.5

Source: Katz (2003: Table 4), based on CEPAL household surveys with the exception of the weighted mean for Latin America which was calculated by the author from the raw data provided by CEPAL/Unidad de la Mujer.

Notes: (a) includes hotels and restaurants; (b) includes personal, public and social services, (c) includes mining, utilities, construction, transportation, communications and financial services; (d) excludes Guatemala and Dominican Republic.

As table 7 also shows, there is a marked gender division of labour in the main sector of non-agricultural employment. Rural women are concentrated in the service sector, followed by commerce and industry. The largest proportion of men is in "other" occupations (including mining, utilities, construction, transportation, communications and financial services), followed by an approximately equal division among services, industry and commerce. There are also markedly different country patterns. The service sector (including personal, public and social services) is the leading sector for rural women in 8 of the 13 countries (Brazil, Chile, Colombia, Costa

Rica, Dominican Republic, Mexico, Nicaragua and Panama), whereas commerce is the leading sector in four (El Salvador, Guatemala, Honduras and Paraguay), with women in Bolivia being equally divided among these two sectors. Men are concentrated in the "other" category in all but the Dominican Republic, Guatemala and Paraguay, where industry leads their non-agricultural employment, and Mexico, where services do so.

While in no country is industry the leading sector for economically active rural women, between 19 to 25 per cent of economically active rural women are employed in this sector (in descending order) in Guatemala, the Dominican Republic, El Salvador, Honduras, Costa Rica and Mexico. A breakdown of the industrial sector to ascertain the relative importance of self-employment versus wage employment would be of great interest, but this is as yet unavailable. The presence of *maquilas* (small garment factories mostly producing goods for export) in rural areas has been noted in the literature for all six countries. Nonetheless, little information is available on the magnitude of the employment that they provide, or on whether rural women are more likely to find wage employment in the *maquilas* or in small family enterprises, or to engage in own-account subcontracting work.<sup>24</sup>

The different types or forms of participation in off-farm employment or in the non-agricultural sector have only been analysed rigorously by gender for a few countries. In Nicaragua (Corral and Reardon 2001) and Honduras (Ruben and Van der Berg 2001), rural women are more likely than rural men to be engaged in non-agricultural self-employment as their primary form of employment. In contrast, men are more likely to engage in agricultural wage employment (Honduras and Nicaragua) or non-agricultural wage employment (Honduras). Katz (2003) concludes that this pattern reflects both supply and demand factors. Self-employment is more flexible than wage employment and may allow women to combine income-generating activities more easily with their domestic and childcare responsibilities. Moreover, formal labour markets are often highly segregated by gender, confining women to certain subsectors and occupations.

Nonetheless, this pattern does not hold up across Latin America. In Ecuador, for example, the only significant difference by gender in terms of forms of participation in non-agricultural activities is for non-agricultural wage labour, with women more likely to participate than men (Elbers and Lanjouw 2001). This could perhaps be due to a high concentration of women in domestic service. Research on Mexico has demonstrated that the form of participation in off-farm employment may depend crucially on an individual's age and family position. For example, spouses (the majority of whom are women) are more likely to be engaged in self-employment (in commerce or micro enterprises) than are male heads of households. In contrast, younger women in farm households are more likely to participate in non-agricultural wage work than are male heads, and this likelihood increases with years of education (de Janvry and Sadoulet 2001).

One of the most important findings of recent econometric work is the tendency in Ecuador, El Salvador and northeast Brazil for economically active rural women to be more likely than men to engage in low-productivity, lowly remunerated non-agricultural activities, with wages measured against either the average agricultural wage or the rural poverty line.<sup>25</sup> Neither the Ecuador nor El Salvador studies provide much detail on the specific activities that fall in the low-productivity category and on whether these are concentrated in self-employment. In northeast Brazil these low-productivity activities include cloth weaving, street and market vending, own-account services (such as laundresses), personal services (such as domestic service) and other informal activities, which seems to include a mix of waged and self-employment activities.

<sup>24</sup> See Lanjouw (2001) on the importance of textile subcontracting work for rural women in El Salvador. Also see Arias (1987) for a review of how both women's employment in rural maquilas and in subcontracting work became widespread in central and central-western Mexico during the 1980s.

<sup>25</sup> Ferreira and Lanjouw 2001; Elbers and Lanjouw 2001; Lanjouw 2001.

Controlling for similar individual, household and regional characteristics, in Ecuador it was found that women's non-agricultural labour earnings are 29 per cent less than men's (Lanjouw 2001). For Ecuador it was found that for non-agricultural wage earnings—the type of non-agricultural employment in which women are more likely than men to be engaged—controlling for other factors, women earn about 70 per cent less than men (Elbers and Lanjouw 2001). A study of two municipalities in Chile also found that returns by gender were differentiated according to the type of employment in non-agricultural activities (Berdegué et al. 2001). In both municipalities, men earned more than women in agricultural wage employment and in non-agricultural self-employment; in contrast, women earned more than men in non-agricultural wage work. These jobs were also the highest remunerated activities of all, and were in commerce, other services or manufacturing.

The work by Lanjouw and colleagues suggests that non-agricultural employment can be thought of as constituting two paths, one consisting of "safety net" or "last resort" jobs to keep households from destitution, and the other a means of household upward mobility. That female participation in non-agricultural employment is linked with low-productivity, low-remunerated activities in many (but not all) countries is particularly worrisome, since economically active rural women appear to be so concentrated in the non-agricultural sector.

Several in-depth studies of rural communities in Mexico provide good evidence that women's income-generating activities, and particularly their off-farm employment, have increased in recent decades, principally in response to the economic crisis.<sup>26</sup> Frances Rothstein (1995) studied a Nahuatl peasant community in Puebla, Mexico, from 1971 to 1989 as it was transformed from a traditional peasant community, to reliance on the wage income generated by male workers, to reliance on a variety of income-generating activities carried out by both men and women. As a result of land pressure and deteriorating conditions for agricultural production, by 1980 half of the males 12 years and older were working as wage workers, principally in textile factories in Puebla and Mexico City. In this period women were still confined to the home, engaged in animal care and subsistence production.

According to Rothstein, it was the crisis of the 1980s, including high inflation, unemployment and declining real wages, that compelled households to pursue multiple income-generating strategies. These included an increase in the number of income earners per household and the active economic participation of women outside the home or family plot of land. While women's income-generating opportunities expanded, they are still more limited than men's, with women primarily engaged in agricultural wage labour, domestic service, commerce, or employed in small manufacturing workshops. Another consequence of the crisis is that men have been abandoning their wives at an increasing rate, particularly after they migrate to seek work in Mexico City, and what was initially intended to be temporary migration becomes permanent. The share of female-headed households rose from 8.5 per cent in 1980 to 14 per cent in 1989, and the number of hidden female-headed units within extended families has also been on the rise (Rothstein 1995).

Soledad González Montes (1994), who studied another Nahuatl community in the state of Mexico, also shows how once agriculture ceased to be the main source of income for rural households, there was an increase in the remunerated work of women and a diversification in their income-generating activities. Up through the 1960s the main employment opportunity for young women was as domestic servants in Mexico City. They usually returned to the village to marry, with their primary economic activity then focusing on subsistence agricultural

<sup>26</sup> Also see Mones and Grant (1987) on how rural women's income-generating activities in the Dominican Republic have increased as a result of the economic crisis of the 1980s. There the increase was in the number of low-productivity activities carried out by women primarily in the home, such as the production of foodstuffs for sale from their doorsteps and the production and vending of clothes and flower arrangements.

production. Only women from poorer households worked as agricultural wage workers in the local peasant labour market. She emphasizes how it was the appearance of better-remunerated alternatives in the non-agricultural sector since 1980 that led to a diversification in women's economic activities. The fastest growing source of employment for both single and married women was in commerce (ranging from the selling of prepared food-stuffs in Mexico City to the setting up of stores in town), followed by services (teachers, secretaries, nurses), and industrial work in both maquilas and small workshops.

While these case studies support the argument that one of the main trends of the last few decades has been a diversification in rural women's economic activities, they also lend weight to the argument that it is not women's activity rate, per se, that has changed, but rather the visibility of their work. Rural women have moved from unpaid family labour in peasant agriculture to become either own-account or wage workers in agriculture, or into a broad range of wage and own-account jobs in the non-agricultural sector (Bonfíl 1996). The particular alternative is highly conditioned by locale. As Soledad González and Vania Salles (1995) conclude, there is little doubt that as a result of the crisis and the economic restructuring since 1980, women in Mexico are participating in a broader range of activities, and in many activities that were previously not open to them.

IV.

## methodological problems in analysing changes in rural women's work

Much of the recent literature on Latin America emphasizes that one of the main tendencies of the last several decades has been the feminization of agriculture. Yet the main conclusion reached in the section above is that economically active rural women in Latin America are concentrated in non-agricultural employment. Are these two trends compatible?

The feminization of agriculture can have multiple meanings. It can refer to an increase in rural women's, or rural and urban women's, participation rates in the agricultur-

al sector. It can also be measured as an increase in the share of the agricultural labour force that is female. A higher female share can in turn be the result of a higher female activity rate and/or a decrease in men's participation rate in agriculture. Moreover, the feminization of the agricultural sector might be the result of the underenumeration of women as unpaid family labour in the past, combined with their greater visibility as agricultural wage workers or own-account farmers in the current period.

The under-enumeration of women in agriculture in the population and agricultural censuses has been a constant theme of the women/gender and development field since the 1970s. <sup>27</sup> Under-enumeration in the past could result in an absolute increase in the number of women reporting agriculture as their primary activity while at the same time, if non-agricultural employment is growing at a faster rate, for the majority of active women to be concentrated in non-agricultural activities. This would provide one explanation why a trend towards the feminization of agriculture might be compatible with the reported concentration of rural women in non-agricultural activities. The evidence presented below, however, suggests that the under-enumeration of women in agriculture continues to be a problem.

The sources of under-enumeration are several. If asked their principal occupation, rural women in Latin America tend to reply "their home", since their primary responsibility within the peasant household is the provision of domestic labour. Thus census estimates have tended to measure the socially appropriate gender division of labour—women's role as housewives and mothers—rather than the economic activities in which they normally engage. A second problem is that the censuses have tended to emphasize income-generating activities, thus undercounting participation in subsistence production. A third, related problem is that agricultural participation has been measured quite narrowly, privileging participation in field work. Such a narrow definition ignores a broad range of agricultural activities often carried out by rural women, such as livestock production (particularly of small animals), kitchen gardens, and post-harvest processing activities.<sup>28</sup>

Fourth, in the censuses participation is measured in terms of engaging in an economic activity for a minimum amount of time in the week prior to the census. This is a major problem in terms of capturing women's work in agriculture, given the seasonality of crop production. Moreover, in some cases a minimum time requirement for -classification as economically active is required for only certain categories of workers, such as unpaid family work ers. This was the case in the 1972 Peruvian census, for example, when only unpaid family workers were required to have worked 15 hours in the week prior to the census (Deere and León 1982). Since if an adult male is present he is always considered the primary agriculturalist of the peasant household, other household members are by default considered unpaid family workers irrespective of the relative amount of time each dedicates to agriculture. Thus, the problem of seasonality would lead to a specific undercounting of women rather than men.

Recent household surveys have improved upon census questionnaires by asking if a person engaged in any economic or income-generating activity in either the week or month prior to the survey. Also, recent surveys such as the Living Standard Measurement Survey (LSMS) promoted by the World Bank usually do not place a minimum time requirement for an individual to be considered economically active. A few surveys have also made an effort to capture the full range of activities that should properly be included as part of agriculture. This has led to wildly different estimates of the economic participation rate of rural women in agriculture.

In the early 1990s, the Banco Interamericano de Desarrollo (BID)/Instituto Interamericano de Cooperción para la Agricultura (IICA) project on Women Food Producers carried out small household surveys in 19 Latin American and Caribbean countries, partly to investigate the problem of the under-enumeration of women in agriculture (Kleysen and Campillo 1996).29 The results for Central America are illustrative. The censuses for this region consistently report very low female activity rates in agriculture, ranging from 5 per cent in Panama to 12.4 per cent in El Salvador. The BDI-IICA surveys in five countries revealed that 68 to 90 per cent of the rural women interviewed participated in agricultural and livestock production, with the mean amount of time dedicated to field work (depending on the country) ranging from 2.2 to 6 hours per day. In addition, from 46 to 69 per cent of the women interviewed also tended a kitchen garden (Chiriboga et al. 1996:32). Moreover, a very high proportion of the women reported that they were in charge of agricultural production—from 29 per cent (Honduras) to 48 per cent (El Salvador)—either because they were household heads or because their spouse/partner was temporarily absent or engaged in other activities (Chiriboga et al. 1996:41).

<sup>28</sup> For example, in a traditional peasant region of Colombia, García Rovira, in only 18 per cent of rural households did a woman participate in field work. In 88 per cent, however, a woman engaged in animal care activities, in 53 per cent in agricultural processing, and in 24 per cent in marketing the household's production (Deere and León 1981: table 1).

<sup>29</sup> The problem with this study is that the BID-IICA surveys were not nationally representative. Usually the national sample of 150 to 200 households was drawn from two or three communities, municipalities or states in different regions of the country representing the major food crops grown by the peasantry.

Overall, rural women in Central America as well as in the Andes reported working between 14 to 18 hours a day, with approximately half of this time dedicated to productive activities and the other half to domestic labour (Kleysen 1996). In the Andean country studies it was found that in Bolivia and Peru, rural women dedicated more time to agricultural production than did men; moreover, in these two countries as well as in Colombia, Ecuador and Venezuela women dedicated more time than men to animal production, product transformation and marketing the household's products (Kleysen 1996: table 1.3). On the basis of these surveys, the BID-IICA project recalculated female economic activity rates in agriculture and concluded that the degree of under-enumeration ranged from 69 per cent (Uruguay) to 500 per cent (Guatemala) in the 19 countries (Kleysen 1996: table 1.3).

National survey data for Ecuador is illustrative of how the under-enumeration of women in agriculture serves to distort the analysis of the distribution of economically active women between the agricultural and non-agricultural sectors. Although in this country indigenous peasant women participate actively in agriculture (Hamilton 1998), according to the 1982 census the economic participation rate of rural women was only 12 per cent, but with a significantly higher proportion of women economically active in the sierra (15 per cent) than on the coast (6 per cent). There was also a marked difference in the sectoral distribution of economically active women between the two regions, with 46 per cent of economically active rural women occupied in agriculture in the sierra and only 17 per cent on the coast.

The 1988 Ecuadorean Employment Survey utilized a much broader definition of work, attempting to capture participation in subsistence agricultural production by unremunerated family labour. According to this survey, rural women's participation rate was 70 per cent in the sierra and 20 per cent on the coast. Moreover, agriculture was the primary sector of activity for 72 per cent of women in the sierra compared with only 47.5 per cent on the coast, illustrating that in both regions it was principally women's unpaid labour in agriculture that had been underestimated in the census (Cuvi 1992: tables 1 and 2). This example suggests how the CEPAL estimates presented in table 5 (where the economic activity rate of rural women in Ecuador is reported as 18 per cent for 1990) and table 7 (regarding their distribution by sectors) must be used with a great deal of caution.

Another major difficulty in measuring rural women's economic participation has to do with the multiple economic activities in which they often engage. Over the course of a year, for example, they may participate as unpaid family labour in agriculture while also engaging in wage labour, petty trade and artisan production. For example, Pilar Campaña (1982: table 8) found that in the central Peruvian highlands, married peasant women carried out an average of 2.5 income-generating activities over the course of a year, with slightly over half carrying out three or more. The LSMS surveys have improved upon census data by usually asking a respondent's primary and secondary activity. However, at the moment of analysis, such as in the surveys discussed in Section III, above, these tend to be limited to an individual's primary occupation. This probably leads to a continued underestimation of women's agricultural activities because cash-generating activities, and particularly wage labour participation, tend to be privileged over subsistence-oriented activities. Moreover, the LSMS surveys have still to address the problem of seasonality, that is, that an individual's most important income-generating activity might not take place in the week or months prior to the survey.

<sup>30</sup> Moreover, a characteristic of rural women's work in the Andean region is that they may engage in multiple activities at the same time, for example, when they pasture their sheep, they are usually spinning wool for cloth production while also minding the children (Deere 1991).

This point is well illustrated by the 1992 Chilean National Employment Survey. In answer to the query if they had worked for more than one hour the previous week or sought work in the previous three months, only 88,860 women were categorized as economically active in agriculture, while 3.2 million women were categorized as inactive. When the inactive women were re-surveyed and asked if they had worked at any time in the preceding 12 months, some 28 per cent responded affirmatively. An additional 186,190 women had worked in the agricultural sector, the great majority as temporary workers. They had worked for an average of 3.3 months concentrated between January and March, the peak period of employment in the fruit industry which is that country's most dynamic activity (Barrientos 1997:74–5).

Keeping in mind all of the above sources of underestimation of women, we can now consider the available data on the gender composition of the agricultural labour force in Latin America. Table 8 presents the 1999 CEPAL data for 11 countries, which suggests that women make up 26 per cent of the population occupied in agriculture. Katz (2003: table 5A), working from earlier CEPAL data, estimated an unweighted mean for 17 countries of only 10 per cent for 1990, a decrease from earlier (unweighted) estimates of 16 per cent for 1980 and 13 per cent for 1970 (both for 19 countries). As discussed previously, unweighted estimates for the region are problematic, since trends in Brazil (a country of 173 million) count as much as trends in Nicaragua (a country of 5.2 million). Moreover, the measured participation rate of women in agriculture, and thus the female share of the agricultural labour force, is much higher in Brazil than in most Latin American countries; 31 only in Bolivia is the female share of the agricultural labour force higher, at 28 per cent.

Also, Katz might not have included in her estimates the important share of the economically active population in agriculture that is urban, rather than rural-based. As can be seen in table 8, rural women comprise a higher proportion (27 per cent) of the rural labour force dedicated to agriculture than do urban women (22 per cent) of the urban labour force in agriculture. But in three countries, Chile, El Salvador and Nicaragua, the urban female share is higher than the rural, suggesting another possible source of underestimation in the CEPAL data presented by Katz.

It is useful here to consider the case of Chile in more detail, for it illustrates how the most recent CEPAL data reported in table 8 may also severely undercount women's participation in agriculture. In that table, 49,662 rural women are enumerated as participating in agriculture (11 per cent of the total rural workers in agriculture) plus 54,694 urban women (20 per cent of the total urban workers in agriculture), for a total of 104,356 women. The 1992 Chilean Employment Survey referred to earlier reported a total of 275,050 women employed in agriculture at some time during that year.<sup>32</sup> Since there is no indication that women's employment in agriculture has changed dramatically in the intervening time period, these figures suggest that the magnitude of underestimation of women in agriculture is enormous, and that this is principally due to the difficulty of accurately capturing women's seasonal employment. If we assume that the data in table 8 accurately capture the number of men (both urban and rural) in agriculture, the revised estimate for women would result in their constituting 30 per cent, rather than the reported 14 per cent of the agricultural labour force. This exercise also challenges the conclusion, reached on the basis of the data in table 7, that the majority of economically active rural women in Chile are employed in non-agricultural activities.

<sup>31</sup> The high female activity rates in agriculture for Brazil in the 1990s might reflect the fact that in this country the rural social movements have embarked on a systematic campaign for rural women to valorize their participation in family agriculture by declaring their occupation to be agriculture rather than housework for census and other purposes (Nobre et al. 1998; Deere 2003).

<sup>32</sup> Of these, 88,860 were captured by the earlier survey as having worked in agriculture during the previous three months, whereas 186,190 were initially categorized as inactive but were found, upon re-surveying, to have worked in agriculture some time during the year, principally during the fruit harvest (Barrientos 1997).

		POPU	ILATION OCC	CUPIED IN AC	GRICULTURE,	TABLE 8 RURAL AND	URBAN, BY	SEX, LATIN	AMERICA, 1	1999		
	RURAL					URE	BAN		TOTAL			
	Women	Men	Total	% Women	Women	Men	Total	% Women	Women	Men	Total	% Women
Argentina					6695	60,147	66,842	10.0				
Bolivia	547,642	644,961	1,192,603	46.0	19,369	55,697	75066	25.8	567,011	700,658	1,267,669	44.7
Brazil	4,288,881	7,401,103	11,689,984	36.7	1,245,539	3,23100,2	4,476,541	27.8	5,534,420	10,632,105	16,166,525	34.2
Chile	49,662	407,232	456,894	10.9	54694	224,377	279,071	19.6	104,356	631,609	735,965	14.2
Colombia	364,931	2,819,030	3,183,961	11.5	36,537	261,530	298067	12.3	401,468	3,080,560	3,482,028	11.5
Costa Rica	16,990	203,986	220,976	7.7	2703	28,088	30,791	8.8	19,693	232,074	251,767	7.8
Ecuador					29405	198,989	228,394	12.9				
El Salvador	30,011	369,026	399,037	7.5	6,648	66,222	72,870	9.1	36,659	435,248	471,907	7.8
Honduras	38,895	609,032	647,927	6.0	8,485	75,905	84,390	10.1	47,380	684,937	732,317	6.5
Mexico	1,569,889	5,404,610	6,974,499	22.5	125,131	411,198	536329	23.3	1,695,020	5,815,808	7,510,828	22.6
Nicaragua	43,611	402,168	445,779	9.8	12,826	82,294	95,120	13.5	56,437	484,462	540,899	10.4
Panama	4,354	117,312	121,666	3.6	1,887	45,578	47,465	4.0	6,241	162,890	169,131	3.7
Paraguay	118,129	458,434	576,563	20.5	8,478	40,182	48,660	17.4	126,607	498,616	625,223	20.3
Uruguay					5,493	34,224	39,717	13.8				
Venezuela					53,233	858,375	911,608	5.8				
Total	7,072,995	18,836,894	25,909,889	27.3	1,617,123	5,673,808	7,290,931	22.2	8,690,118	24,510,702	33,200,820	26.2
Share r/u	81.4	76.9	78.0		18.6	23.2	22.0		100	100	100	

Source: Data provided by CEPAL/Unidad de la Mujer 2003 Notes: Figures are for the population aged 15 years and older

While the overwhelming proportion of urban women in agriculture in most countries are undoubtedly wage workers, it is difficult to discern whether rural women in the agricultural labour force are primarily own-account workers, unpaid family labour, or wage workers. Few countries have published data on the distribution of the agricultural EAP according to the category of their employment; the United Nations (UN) Food and Agriculture Organization (FAO) has compiled a few of these estimates from the agricultural censuses of the 1990s (in Katz 2003: table 5b). The most complete data available are for Mexico, and show that in 1991 women constituted 15 per cent of household agricultural labour, 6 per cent of permanent wage workers and 9 per cent of temporary wage workers.

First, note that these figures are way below the proportion of women in the Mexican agricultural labour force reported in table 8, where they constitute 22.6 per cent of the total. Second, the figure for household agricultural labour presumably includes both own-account workers (the primary agriculturalist) and unpaid family labour, and thus is not very helpful in discerning the proportion of women managing farms. Moreover, case study evidence on the high participation of women in peasant agriculture in Mexico suggests that this figure grossly underestimates the proportion of women who are own-account as well as unpaid family workers, points developed in Section VI. As will be demonstrated in the next section, it also underestimates the proportion of women who are temporary agricultural workers.

In the agricultural census data compiled by the FAO, partial data on the proportion of women agricultural workers, for either household-only agricultural labour and/or permanent wage workers, is provided for another six countries. The most consistent of these figures is the 1996 estimate for Brazil, where women are reported to constitute 38 per cent of family workers and 14 per cent of permanent workers (Katz 2003: table 5b); according to the 1999 household survey data (table 8), women constitute 34 per cent of the total agricultural labour force. Yet precisely what is missing is the proportion of women temporary workers, where case study evidence again suggests that their participation is quite high.

Finally, another problem that complicates the analysis of changes in rural women's economic activity rates and its distribution by sectors is that the most visible growth in female employment over the last two decades, as will be demonstrated in the next section, has been in non-traditional agro-export production, and particularly in the packing houses for fruit and vegetable export activities. It is not at all clear whether the various estimates of economically active women are consistent in treating such employment as agricultural or industrial, although it should properly be classified as agricultural, since it consists of agricultural services.<sup>33</sup> Obviously, if in household surveys packing activities have been considered as part of industry, then the degree of concentration of rural women in non-agricultural activities would be overestimated.

In sum, the multiple sources of under-enumeration of women's agricultural participation make conclusions regarding trends in rural women's employment quite problematic, particularly with respect to their concentration in non-agricultural activities. Moreover, the increase in rural women's economic activity rates reported in table 5 could simply reflect the under-enumeration of women in agriculture in the past. My main hypothesis, to be developed in the next two sections, is that the major change over the past few decades is that rural women's work has become more visible than ever, and that rural women have gone from being unpaid family workers in agriculture to remunerated workers in both the agricultural and non-agricultural sectors. But given the problematic nature of the data, the argument that the main trend points to a feminization of agricultural wage workers and as own-account workers in agriculture.

 $\overline{V}$ 

## agricultural labour markets as gendered institutions

From the point of view of demand, by the 1970s three distinct labour markets characterized agrarian Latin America. The most dynamic in terms of total employment was associated with the export sector, and depending on the country and time period, included sugar cane, bananas, coffee, cacao, tobacco, livestock, cotton and soy production. A parallel labour market developed at the behest of capitalist firms oriented toward the domes-

tic market and producing basic grains, potatoes, oil seeds, and meat and dairy products. The third was the local peasant labour market, and depending on the country and region, included producers of export crops and/or

<sup>33</sup> Email communication to the author from the International Labour Organization (ILO) (19 Jan 2004) and CEPAL Agricultural Unit (19 January 2004).
In the UN classification of economic activities, ISIC, rev.3.1, packing activities are classified in groups 011 and 014 of the agricultural sector and all workers in these units are considered as part of the agricultural sector irrespective of whether these workers do agricultural-related jobs.

those oriented towards the domestic market. The degree to which these labour markets overlapped or were spatially distinct largely depended on geography and natural and physical endowments.<sup>34</sup>

As a result of the process of mechanization and modernization of agriculture, by the late 1970s the capitalist agricultural sector was characterized by shrinking permanent employment opportunities, a trend that was accentuated in subsequent decades (de Janvry et al. 1989). Permanent agricultural workers have always been the most likely to be organized in rural unions. As a result, they have been the most likely to be covered by labour legislation and social security provisions. In the agrarian reforms of the 1960s to 1980s, they were also the most likely to become beneficiaries as capitalist farms and estates were transformed into agrarian reform cooperatives (for example in Peru, Chile, Nicaragua, Honduras and El Salvador).

The great bulk of the labour demanded for agro-export production has been concentrated in harvest activities, the most labour-intensive aspect of production. Throughout Latin America, women's participation as wage workers has been associated with the harvests of coffee, cocoa, tobacco and cotton (see appendix I). Harvest labour has required the participation of the whole family—men, women and children—due to its association with piece rate payment. The labour of all family members has been necessary either to meet the basic harvest quota or to earn a satisfactory wage. In many regions, the initial participation of women in wage labour was in fact as family members rather than as individual workers, with only male household heads being specifically recruited and subsequently receiving the wage earned by the whole family group. In Mexico this form of familial recruitment is still associated with the participation of married women as wage workers in some regions, and with long-distance, seasonal migration by married women for harvest work.<sup>35</sup>

Whereas women everywhere in Latin America are associated with participation as wage labourers in coffee, cotton, tobacco and cocoa production, their participation in sugar cane, banana and livestock production for export has been much more limited. Sugar cane production has been a male-only activity in most parts of Mexico, Central America, the Caribbean and the Andean coast.<sup>36</sup> The only country where women constitute an important share of the cane harvest workforce is Brazil (Spindel 1987; Ferrante 1995). Banana production for export, concentrated in Central America and Ecuador, has also been gendered as a male activity, comparable only to livestock export production in Argentina, Uruguay and Central America.

Unfortunately, data on the magnitude of female employment in traditional export agriculture is sparse. A mid-1970s study in one department of Honduras estimated that women provided 91 per cent of the labour days employed in coffee production and 48 per cent of those required in tobacco production. On average women were employed only three months out of the year in coffee production and 5.4 months in tobacco production (Buvinic 1982).

Among the few national-level studies of the agro-export labour market were those carried out in Nicaragua in the 1980s. A study carried out shortly after the triumph of the Sandinista revolution, in 1980–81, revealed that women represented 32 per cent of the wage labour force in the cotton harvest and 28 per cent of that in the coffee

<sup>34</sup> In the Andean countries, for example, export agriculture until recently has been concentrated on the coast, and production for the internal market (with the exception of rice and to a certain extent oilseed and dairy production) in the highlands.

<sup>35</sup> Marroni de Velázquez 1995; Lara Flores 1998; Robles 2000.

<sup>36</sup> Robles (2000) mentions that indigenous women from the Sierra Norte de Puebla migrate with their families to the cane region of Veracruz, implying that they too work in the cane harvest. Also, in the past whole indigenous families would migrate from Bolivia to the cane harvest in Argentina. Rarely, however, would women actually cut cane; rather they and the children would pick and pile up the loose cane left behind by the combines. Email communication to the author from Norma Giarracca, February 2004.

harvest, this country's two main export crops (CIERA et al. 1987: table 1.1). Shortly thereafter Nicaragua was convulsed in civil war, and one of the defining characteristics of this period was the "feminization" of agriculture as men were called to the war effort. The 1984–85 labour market study found that women now encompassed 56 per cent of the harvest workers for cotton and 41 per cent for coffee (CIERA et al. 1987: table 1.1).

The more detailed 1984–85 study of 60 agro-export farms (both state and private) dedicated to cotton, coffee and tobacco production found that in total, women constituted 35 per cent of the labour force, representing 45 per cent of the temporary workers but only 26 per cent of the permanent workers (those employed over six months per year). The highest proportion of women workers was in the tobacco sector, where they constituted 48 per cent of the total wage labour force, and the highest percentage of both temporary and permanent workers (CIERA et al. 1987: table 1.2). This study concluded that the feminization of agro-export production was characterized not only by an increasing share of women in the labour force but also by a substantial increase in the number of months a year in which women were employed, leading to a substantial increase in the proportion of female permanent workers. This change, in turn, was associated with an increase in the number of women hired for what had been "male only" tasks and jobs, and with the predominance of women in what had been "mixed" tasks, illustrating how occupational segregation by gender breaks down in situations of labour shortage.

Another view on rural labour markets and the degree of female participation in wage labour is provided by some of the rural household surveys undertaken in the 1970s. A study of three Andean regions revealed that in the region characterized by the highest degree of capitalist development, the Colombian region of El Espinal, 35 per cent of peasant household members over the age of 13 participated in the labour market (Deere and León 1981, 1982). Whereas the participation rate for men was 56 per cent, for women it was only 14 per cent. Similarly in Cajamarca, Peru, a region that had undergone substantial capitalist development by the 1970s, while the overall participation rate in wage labour was 27 per cent, for women it was only 9 per cent. The gender differential also held in García Rovira, Colombia, the most traditional peasant region, where only 8 per cent of adults participated in wage labour, with the participation rate of men (10 per cent) exceeding that of women (6 per cent). Peasant women's participation in wage labour was inversely related to the household's access to land, being concentrated even more than among men in the near-landless and smallholder strata.

In both Cajamarca and García Rovira, non-agricultural wage employment slightly exceeded agricultural employment, with this trend being stronger among women than among men. In contrast, in El Espinal where capitalist agriculture oriented toward the production of cotton and rice for the internal market was well established, both male and female wage workers (92 and 68 per cent, respectively) were employed primarily in agriculture (Deere and León 1981: table 7). There was a clear gender differentiation in the type of wage work available. Whereas men occupied almost all the permanent agricultural positions, women were employed as temporary workers during the peak harvest seasons, with the majority of them being employed less than four months a year.

The participation of women in wage labour from smallholding households in regions dedicated to coffee production is generally higher than in regions dedicated to basic grain production (León et al. 1980). In Puebla, Mexico, for example, women participated in wage labour, principally for the coffee harvest, in 43 per cent of households, with the rate of participation inversely related to a household's access to land (Moreno 1987).

These surveys also shed light on the demand side of the peasant labour market in the 1970s. In Cajamarca, Peru, of the total labour days employed by 93 peasant farms, 14 per cent were provided by wage labour, 15 per cent by traditional labour exchanges, and the remainder by family labour. Whereas women provided 25 per cent of the family labour and 14 per cent of the labour exchanged, they constituted only 10 per cent of the wage labour. In the advanced capitalist region of El Espinal, Colombia, remunerated labour (including wage labour, that paid in kind and labour exchanges) provided 84 per cent of the total labour employed on 216 peasant farms. Of the total remunerated labour days, 16 per cent was provided by women. Women constituted a higher share of the non-remunerated labour days, 25 per cent of the total (Moreno 1987).

Case studies thus suggest that by the 1970s rural women were participating in all three labour markets, the local peasant labour market, the labour market generated in certain regions by capitalist firms producing for the internal market, and the labour market for agro-export production. In all of these women were concentrated in the category of temporary workers, generally those employed only for the most labour-intensive tasks, particularly the harvest. Another characteristic common to all three labour markets was that women were generally paid less than men, even for the same work, whether in the peasant labour market or that of capitalist firms.<sup>37</sup> A main characteristic of agro-export production in this period was that where both men and women performed the same task, these were remunerated by piece rates. The tasks that were normed or paid by the day were characterized by a gender division of labour, with women's tasks being paid less than male-only tasks (CIERA et al. 1987:59–60).

Finally, what the above case studies confirm is that women's participation in the agricultural wage labour force has been greatly underestimated in the population and agricultural censuses. For example, in the 1973 Colombian census women constituted only 3.4 per cent of the agricultural EAP; in that of Peru for 1972 they made up 9.4 per cent. Of the meagre 149,360 active women in agriculture enumerated in the latter census, only 17.6 per cent were categorized as wage workers (Deere and León 1987: tables 1 and 2). The problem of underenumeration makes it difficult to assess the degree to which recent decades have been characterized by a feminization of the agricultural wage labour force.

V.A

## the development of non-traditional agro-export production

The boom in non-traditional agro-export production associated with the crisis-ridden 1980s in Latin America has led to a plethora of studies on women's agricultural wage work. Almost uniformly, the incorporation of women workers in the new fruit, vegetable and flower export industries has been deemed a process of

feminization of agriculture. Here we try to establish what exactly is new. This is a difficult task, for although the literature on the current period is much more abundant than on women in traditional agro-export production, it suffers from the same deficiency. There are few reliable estimates of the magnitude of women's employment in these industries, partly because of its precarious and temporary nature. Also, what is considered non-traditional agro-export production varies by country, depending on the specific crops developed for export over the past three decades. Since in most Latin American countries these include fresh fruit and vegetables and sometimes flowers, we concentrate on these commodities in the discussion below.

<sup>37</sup> In El Espinal, women earned 80 per cent of what men normally earned in agricultural wage labour (Deere and León 1981). In Oaxaca, Mexico, women earned from 40 to 60 per cent less than men in local agricultural wage labour (Young 1982:69). Also see Moreno (1987) and the citations in Lara Flores (1991) on the early studies in Mexico on rural workers and the conditions of work.

<sup>38</sup> The definition of non-traditional also varies by time period. In Central America, for example, cotton, sugar and beef exports where considered non-traditional exports when these were introduced in the post-Second World War period. Today they are considered traditional export products. See Barham et al. (1992).

Non-traditional agricultural exports began making an appearance in the 1960s in Mexico and Chile. In Mexico this development was associated with the expansion of irrigation in the arid northwestern region of the country, bordering the United States. While there had been previous experiments in the export of fresh fruits and vegetables to the US market dating from at least the 1920s, the catalysts in the 1960s included the abrupt halt of Cuban exports of fresh produce to the US market (as a result of the US embargo of the island after 1961) and an expansion in US demand, related to rising incomes and changes in consumer tastes, favouring fresh fruits and vegetables over canned ones. Among the first non-traditional Mexican agricultural exports were tomatoes, strawberries, cucumbers, cauliflower and broccoli, geared to the US winter market when Mexican production was complementary to that of the United States and tariff levels were lower (Lara Flores 1992).

The development of non-traditional agro-export production in Chile largely responded to the imperatives of the neoliberal economic model instituted after the military coup of 1973. Chile was the first country in Latin America to restructure its economy along the lines of comparative advantage by drastically reducing tariffs and other support to import substitution industries, including domestic-oriented agriculture. The liberalization of external markets had profound effects, reorienting the agricultural sector toward the production of temperate crops that could compete in Northern markets during their winter season.

Chile's Central Valley has a long history of fruit production, principally of grapes oriented to the wine industry. But it was the economic crises of the 1970s and early 1980s that brought about the large-scale conversion of the Central Valley to fruit production, including not only grapes (which witnessed a diversification in varieties to include table grapes and those for raisin production), but also peaches, nectarines, apples, cherries and kiwis. This process was facilitated by the undoing of the agrarian reform in the mid-1970s and the development of the land market, which led to a new process of land concentration at the behest of a new class of agrarian entrepreneurs and agribusinesses. Between 1962 and 1988 Chile's fruit exports witnessed a 26-fold increase, and it had become the world leader in the export of fresh fruit by the end of that decade (Thrupp et al. 1995; Lara Flores 1995).39

In the 1970s other Latin American countries also began to promote export diversification, spurred by growing trade deficits (partly due to the oil price hikes of this period) and the deterioration in terms of trade for traditional agro-exports. Growing competition among countries in the South in traditional agricultural exports such as coffee, bananas, sugar and cotton led many governments to experiment with incentive schemes of various types, including tax and credit inducements for diversification. The development of the flower industry in Colombia,<sup>40</sup> for example, dates from this period, as does the expansion and diversification of vegetable and fruit production for export throughout Mexico. By 1985 Colombia had become the number two exporter of flowers in the world, following the Netherlands (Lara Flores 1998). In Brazil, the huge São Francisco Valley irrigation project in the northeast was completed in the 1970s, and was largely oriented to the production of fruits and vegetables for export as well as for the processing industry (Collins 1993).

The promotion of non-traditional agricultural exports became a generalized policy throughout the region with the debt crisis of the 1980s and the adoption of structural adjustment policies. Export promotion became a necessary complement to external liberalization if a trade surplus was to be generated for external debt repayment. The promotion of non-traditional agricultural exports in the Caribbean and Central America was facilitated by the Reagan

<sup>39</sup> See Barrientos et al. (1999) for a detailed analysis of the conditions that facilitated the Chilean success story in non-traditional agro-export production. 40 On the policy package used to promote non-traditional agro-exports in Colombia see Meier (1999).

administration's Caribbean Basin Initiative (CBI), which provided duty-free treatment of certain rubrics to the US market. In concert, the US Agency for International Development (USAID) was reoriented toward assisting the private sector in export development (Thrupp et al. 1995; Dary 1991). Among the more successful country responses to these initiatives was initially that by the Dominican Republic;<sup>41</sup> other "success" stories include the development of flower and ornamental plant production for export in Costa Rica and of vegetables in Guatemala.<sup>42</sup> For Latin American as a whole, non-traditional agricultural exports made up only 10.2 per cent of total exports in 1970 but reached 23 per cent of the total by 1990, while the share of coffee, cacao, tea, cotton and cereals all declined rather precipitously (Lara Flores 1995).

Although Mexico was not a beneficiary of the CBI, its early lead in non-traditional export production, and the large role of US agribusiness in this industry, facilitated a boom in the early fruit and vegetable rubrics and the take-off of new exports such as avocados, mangos, citrus and flowers in the crisis-ridden 1980s. But it was not until the Salinas government began negotiating the terms of the North American Free Trade Agreement (NAFTA) that Mexico began a profound neoliberal restructuring of its agricultural sector. The mantra of Salinas' government became "flexibilization" of the economy, which required liberalization not only of the external sector, but also of land, labour and credit markets (Lara Flores 1992). In preparation for its integration into the North American market, with the latter's comparative advantage in basic grains, the Salinas government reformed Article 27 of the Mexican constitution, bringing agrarian reform to an end and allowing the parcelization and subsequent sale of lands in the ejido sector (corresponding to approximately half of Mexico's agricultural lands). The reforms of land, labour and credit markets were aimed at attracting US capital and, through NAFTA, strengthening Mexico's comparative advantage in non-traditional export production. By the late 1990s fruit and vegetable exports constituted 40 per cent of Mexico's total agricultural exports (Appendini 2002). Its export earnings from fruit and vegetable exports to the US market tripled between 1994, when NAFTA was implemented, and 2002, reaching US\$3.5 billion in that latter year (Audley et al. 2003:75).

In sum, the combination of economic crises, neoliberal policies and trade agreements has led to a fundamental restructuring of Latin America's agricultural sector. Mexico, Brazil and Chile are now among the leading world exporters of fresh and processed fruits and vegetables (Raynolds 1998). By 2001 fruit and vegetable exports constituted the largest agricultural export rubric of Latin America and the Caribbean, reaching US\$ 8.9 billion, and making up 15 per cent of the region's total agricultural, forestry and agro-industrial exports (see table 2).

<sup>41</sup> See Raynolds (1998) on the generous state subsidies, including subsidized access to state land, utilized in the Dominican Republic in response to the CBI.

<sup>42</sup> Between 1979 and 1988 the share of non-traditional agricultural exports increased from 17.1 per cent of total exports to 40.9 per cent in Costa Rica, from 5.8 to 14.6 per cent in El Salvador, from 16.4 per cent to 22.7 per cent in Guatemala, 28.4 to 32.9 per cent in Honduras, and from 18.2 to 29.7 per cent in Nicaragua. The share of traditional exports (coffee, bananas, cotton, sugar and beef) declined in all five countries, most dramatically in Costa Rica (Thrupp et al. 1995).

V.B.

### the feminization of the agricultural wage labour force

There is little doubt that the structural adjustment policies of the 1980s and 1990s facilitated an increase in the size of the wage labour force necessary for the take-off and boom of non-traditional agricultural exports. The data presented earlier on the rise of poverty rates in Latin America speak to the powerful incentive for rural house-

holds to offer their labour power for sale. What is not understood with precision is the extent to which net agricultural wage employment has increased (since the expansion of non-traditional exports has been accompanied by a decline in the traditional agricultural export sector along with domestic-oriented agriculture) or, in particular, whether net total agricultural employment has grown (since peasant agriculture has been in distress).

The CEPAL household surveys suggest that during the 1990s the rate of growth of the rural EAP slowed down, and that the size of the agricultural EAP has remained stagnant since 1980 at around 44 million (David et al. 2001: tables 8 and 9). The country patterns on whether wage employment or own-account agricultural activities have been most affected differ markedly.<sup>43</sup> A recent estimate suggests that total agricultural employment in Mexico has fallen from a high of 8.1 million in 1993 to 6.8 million in 2002. According to this Carnegie Endowment report, "agricultural trade liberalization linked to NAFTA is the single most significant factor in the loss of agricultural jobs" (Audley et al. 2003:20). Unfortunately, however, this data has not been broken down by gender or form of employment, although presumably the majority of those displaced are from the peasant sector.

There is consensus that women are an important component of the wage labour force engaged in field work for nontraditional agro-export crops, perhaps constituting at least half of these workers. Moreover, they always constitute a majority of the wage labour force employed in the packing operations required for export (see appendix II).<sup>44</sup> However, as discussed above, women were always an important component of the temporary labour force of a number of traditional export crops. Since their participation in the past was largely undercounted, it is difficult to judge whether the net wage employment of women has increased, and in particular, their relative participation with respect to men. Further, the under-enumeration of peasant women as unpaid family workers on family farms is notorious. What is perhaps new is that rather than being invisible workers on family farms they are now quite visible participants in agro-export production. Thus rather than a change in their (unofficial) labour force participation rate, what we may be seeing is a change in their labour market participation rate, particularly as independent wage workers.

The main factor that supports the argument that the development of non-traditional agricultural exports has increased absolute employment opportunities for women in agriculture is the fact that their production and packing are particularly labour-intensive, much more so than traditional agricultural exports. For example, the production of peaches and apples in Chile requires between 330 and 398 person-days per year per hectare. In comparison, mechanized cereal production in that country requires only 4–5 days per hectare (Lago and Olavarria 1982). Flower production in Colombia and Ecuador is estimated to involve an average of 200 persondays per hectare, compared with 44 for coffee, 33 for bananas and 150 for potato production. In Guatemala traditional corn and bean production require only around 60 person-days per hectare, whereas the production of broccoli requires 197, cauliflower 276, and snow peas 663 days per hectare (Thrupp et al. 1995: table 9). The

<sup>43</sup> The CEPAL household surveys reveal a decline in the number of agricultural wage workers in Brazil, Mexico, Panama and the Dominican Republic. Costa Rica, Honduras, and Venezuela, as well as Mexico and Panama, again show a decline in the number of own-account agricultural workers (David et al. 2001: table 12).

<sup>44</sup> In some countries, such as the Dominican Republic, women also constitute a large proportion of the workers in the food processing industry linked to non-traditional agro-exports (Raynolds 1998). The literature on employment in food processing activities is relatively meagre, however, and will not be dealt with here.

problem is that the demand for labour is concentrated in a very short period of time, often three months or less, thus what are being generated are seasonal, temporary jobs.

Good data on the size of the agricultural wage labour force and its distribution between traditional and non-traditional exports is not even available for Mexico, the country where non-traditional agro-exports have been studied in most depth. Various global estimates for the 1980s are cited by Lara Flores (1992:39), including (a) that women constitute between one-third to one-half of the agricultural wage labour force (based on a 1989 International Labour Organization (ILO) report); (b) that there were approximately 4 million wage workers in agriculture, over half of whom were women and children; and (c) that in 1985 there were 1.5 million female wage workers (Arizpe et al. 1989). The 1991 National Employment Survey enumerated 5.4 million agricultural wage workers, 26 per cent of whom were women (1.4 million) (Robles 2000:41). Capturing what is a very spatially mobile and only seasonably employed labour force with precision quantitatively is quite a challenge.<sup>45</sup>

More precise estimates on the size of the wage labour force in non-traditional agro-export production in Mexico are available for certain states and crops. The first in-depth study of women in tomato production in the state of Sinaloa estimated that in 1979–80, from 80,000 to 90,000 female wage workers were involved in tomato production, including both field labour and those employed in the packing complexes. At that time women represented between 50 and 60 per cent of the field workers and 90–95 per cent of those in the packing complexes (Roldán 1982). A decade later it was estimated that the total number of wage workers in vegetable production in this state was on the order of 950,000, and that women constituted 40 per cent of the field workers and around 90 per cent of those in the packing houses (Lara Flores 1992, 1995). Various studies have noted how the majority of the temporary field labour employed in tomato and vegetable production in general in this state consists of indigenous families from the south of Mexico, and how the labour of men, women and children is indiscriminately employed in the harvest (Lara Flores 1992, 1995; Barndt 2002).

A study of fruit and vegetable production in six northern Mexican states estimated that women represented at least half if not more of the field workers (Collins 1995). With respect to avocado and mango production in Michoacan, a detailed study estimated women to make up 50 and 40 per cent of the labour employed in the fields and packing houses respectively for these export crops (Suárez 1995). The most feminized of all non-traditional agricultural exports in Mexico appears to be cut flower production, where it was estimated that women make up from 70 to 80 per cent of the workers (Lara Flores 1998; Becerril 1995).

Turning to Chile, it was estimated that in the 1970s there were approximately 25,000 field workers employed in the fruit industry in the Putaendo region of the Central Valley, 20 per cent of whom were women. In the packing houses for peaches and nectarines in this region women made up only 14 per cent of the permanent wage workers but 77 per cent of the temporary workers employed in this activity (Aranda 1982). Female employment in fruit and vegetable production in the Central Valley continued to grow over the subsequent decades. <sup>46</sup> In the 1980s it was estimated that from 70,000 to 100,000 women were employed in the fruit industry, and this figure grew to 150,000 by the mid-1990s, with women constituting over half of the temporary workers employed (Lara Flores 1992, 1995; Barrientos 1997). <sup>47</sup>

<sup>45</sup> The magnitude of the underestimation of women is apparent when these numbers are compared with those forthcoming from Mexico's censuses. In 1970 women were reported to constitute only 9.2 per cent of the agricultural EAP; 12.3 per cent in 1980 and 14.2 per cent in 1990 (Martinez Medina 1996a). The number of women enumerated in agriculture increased from 266,650 in 1970 to 742,710 in 1980 (González Montes and Salles 1995:24).

<sup>46</sup> Between 1964 and 1987 the number of permanent jobs in the Chilean agricultural sector fell from 208,000 to 120,000 while temporary jobs grew from 147,000 to 300,000 (Jarvis and Vera-Toscano 2004, citing Gómez and Echenique).

<sup>47</sup> Jarvis and Vera-Toscano (2004) estimate that in the 1990s women made up approximately 30 per cent of fruit sector employment.

Other large concentrations of female workers include grape production in Brazil's São Francisco Valley, where they constitute approximately two-thirds of the field labour (Collins 1993), and the flower industry in the Sabana of Bogotá, Colombia, where in the 1990s women made up between 60 to 80 per cent of the 75,000 to 85,000 workers (Lara Flores 1995; Meier 1999).

The main conclusions that can be drawn from the review of the case study literature are as follows. First, the labourintensive tasks of non-traditional agro-export production employ a large share of female workers for the same reason that they were employed in the most labour-intensive traditional export crops: women constitute a source of cheap labour that can be drawn upon seasonally, at the peak periods of labour demand. Thus there is a great deal of continuity in the role that rural women play as a labour reserve for agro-export production. Second, just as in the past, there is a tendency for those permanent jobs that are created in non-traditional agro-export production to be reserved for men, with women concentrated in temporary jobs. A similar gendered ideology continues to define the employment of women as secondary workers, whose primary responsibility is in the domestic realm. Thus they can be drawn upon seasonally as befits the needs of export production, since they are not viewed as needing or desiring full-time employment.

Third, low wages continue to be maintained by the employment of women for the agricultural tasks that are remunerated as piece work, a general characteristic of harvest labour. This form of remuneration encourages the participation of the whole peasant family, overcoming whatever cultural resistance may be at play regarding rural women's economic participation outside the home. It also increases the intensity of labour.

What appears to be new in terms of women's participation in field work for agro-export production is the spatial dimension. Whereas women have always participated in local agro-export harvests in most countries, in the past they have rarely been among the contingents of highly mobile seasonal workers that follow the harvest from region to region. This was primarily because of women's responsibility for domestic labour, and a gender division of labour sufficiently flexible for women to assume management of peasant agricultural and livestock production during periods of male absence. With the growth in landlessness and falling real wages, combined with the demand for female and child labour, whole families are now among the temporary agricultural migrants, particularly in Mexico, where seasonal rural–rural migration has a strong ethnic dimension (Bonfíl 1996; Buechler 2004). As Lourdes Arizpe and colleagues note, "in order to achieve the same purchasing power as was given by the father's wage in 1975, in 1985 the father, the mother and one child have to find paid employment" (Arizpeet al. 1989:258).

Some of the other changes noted are country-specific and involve areas where because of the geography traditional tropical agro-export production was never an option, such as in the Southern Cone. Chile has been characterized by a white and mestizo peasantry traditionally dedicated to the production of basic grains, and by a strong "cult of domesticity" regarding the position of rural women. They have tended to participate minimally in agricultural field work, with their socially appropriate agricultural activities being limited to kitchen gardens, the production of small animals and the post-harvest processing of crops (Aranda 1982).48 Women's large-scale participation in field work around the fruit harvests thus constitutes a significant break with gender norms. What Chilean female agricultural field workers in the fruit industry share with their counterparts in countries such as Brazil, Colombia and increasingly Mexico, is that a significant proportion of them live in urban rather than rural

<sup>48</sup> Nonetheless, in her survey of peasant households in the Putaendo Valley, Aranda (1982) found that 33 per cent of the women participate in harvest activities and 20 per cent in weeding, with the range of tasks and crops in which women participate positively correlated with the size of the farm.

areas. This is related to growing land shortage, the decay of peasant agriculture, and the growth of migration to towns and smaller cities rather than to the large metropolitan centres as in the past (Aranda 1982; Lara Flores 1992).49

Another major change with respect to women's participation in agricultural field work has to do with the yearround employment of women in the cut flower industry in Colombia, Ecuador and Mexico, the only industry to develop primarily on the basis of female labour, and where female field labour often consists of high-tech nursery production.

The large-scale incorporation of women into the packing stage of non-traditional agro-export production marks the most important change in women's agricultural participation over the last couple of decades. While women have traditionally made up a large share of the labour employed in coffee and tobacco processing, these activities were never gendered to the extent that non-traditional agro-export packaging has been. What appears to be driving what is an undoubtedly a feminization of a stage of production in this period is that fresh fruits and vegetables are produced for a highly competitive market where profits depend on the appearance and quality of the produce. A major change is that women's employment is now associated with one of the most technologically advanced aspects of the production process.

### flexibilization and segmented Since the early 1980s the literature on gender and globlabour markets

alization has highlighted the increasing preference among employers for women workers in all sectors of the economy, but particularly in the most labour-intensive industries. This tendency has been linked to the possi-

bility for occupational segregation—the employment of women in specific branches of industry and occupations—where lower wages prevail. In addition, the preference of employers for women has been linked to specific feminine characteristics, such as (a) their greater submission and docility and hence willingness to follow orders while being less likely to organize; (b) their greater dexterity in the production of small objects or those processes that require care and patience; and (c) their flexibility with respect to the conditions of work (Elson and Pearson 1981; Benería 2003).

The literature on the employment of women in Latin American non-traditional agro-exports has tended to emphasize this latter process—flexibilization in the context of the increasing precariousness of work—while demonstrating how gender subordination conditions women's integration into the labour force. Flexibilization is usually defined in terms of a firm's ability to move workers from one stage of the productive process to another, and from one product to another, while progressively increasing labour productivity. A flexible labour force is also associated with flexible hours of work, wages and contracts (Martínez Medina 1996b). Specifically, flexibility is seen as key to productive reconversion in the era of globalization. Previously, the aim was to produce for constantly expanding markets characterized by a minimum of fluctuations, associated with the Taylorist and

<sup>49</sup> In the Putaendo Valley of Chile in the late 1970s almost all of the women employed in the fruit sector resided in urban nuclei. The vast majority of peasant women who participated in wage labour, the majority from households with access to less than one hectare of land, tended to work as agricultural wage labourers for other peasant families rather than in the export sector (Aranda 1982).

Fordist models of industrial organization. In the current context the conditions of production are structured by international competition, uncertainty, and a continuously fluctuating demand (Lara Flores 1992). In the case of non-traditional exports such as fresh fruits, vegetables and flowers, these processes are accentuated, given that these are perishable products and that international competition is driven by quality, specifically appearance.

Sara Lara Flores (1991, 1992, 1995, 1998), in her penetrating analyses of non-traditional export production, argues that the key to productive reconversion is the adaptability of the labour force to market expansions and contractions. This adaptability can be provided through an upgrading of labour skills combined with decentralization, or by greater reliance on precarious labour, with the specific outcome dependent on the social conditions of each country, particularly the capacity for labour organization. In the context of Latin America, where the consolidation of neoliberalism is associated with the weakening of unions, growing poverty and unemployment, the outcome has been the tendency toward what Lara Flores and others term "primitive or savage flexibilization" or precarious employment.

Thus the modernization of Latin American agriculture, based on increasing mechanization, the use of chemicals, and computerized production and processing, has been accompanied by a greater reliance on a mass of temporary workers, often paid by the task or on a piece-work basis, and few permanent workers. Lara Flores argues that "precarious employment appears today as a constitutive element of the rural labour market and the feminization of wage workers is only an integral part of this process" that encompasses all those sectors (children, migrants, indigenous) "in a situation of social devaluation" (Lara Flores 1991:109). Women are the ideal social subject for the implementation of all forms of flexible labour in the different sectors of the economy (maquilas, domestic home work, casual agricultural labour) because women, given their domestic role within the family, have been socialized to have the flexibility to combine production and reproduction. This is also evident in their labour market trajectories, which are characterized by their flexibility in moving from one sector to another.

Lara Flores thus argues against analyses that highlight employer preferences for women based on specific feminine characteristics, such as their dexterity, and places emphasis on the social devaluation of women's work. This devaluation is evident in the way that women are crowded into jobs that are considered unskilled and the worst paid. Instead of a recognition that women's competence and knowledge (such as their dexterity, care and rapidity) are a result of socialization, these characteristics are attributed to the "feminine condition". Moreover, instead of a recognition that their training in the home and for motherhood is a useful training rather than a limitation, these skills are devalued, justifying lower pay scales. 50

Here it is useful to consider a few examples of how occupational segregation by gender contributes to lower wages for women. In the gender division of labour in the tomato packing plants of northwest Mexico in the late 1970s and early 1980s, women predominated in three occupations, those of sorters, classifiers and packers (Roldán 1982). Only in one establishment did men appear among the packers, since this was a female-only task in the other firm, as were the other two tasks.<sup>51</sup> Although women made up 90 per cent of the workers, the few men did all the other tasks in the packing firms such as sealing, carrying and loading the boxes, and driving the trucks to market. They also made up all of the supervisors and administrative workers.

<sup>50</sup> Elson and Pearson 1981; Roldán 1982; Lara Flores 1991, 1998.

<sup>51</sup> Firm-level variation in the gender division of labour is also noted in the study by Appendini, Suárez and Macías (1997) with respect to the cucumber packing firms in Michoacán, Mexico. While in one packing house 73 per cent of the workers were female, in another only 19 per cent were. This latter firm had been unionized several decades earlier and the all-male union controlled the hiring of workers (Macías 1997).

Equal pay for equal work prevailed in these tomato exporting firms when payment was by piece rate. But because of the occupational segregation by gender, men's jobs tended to pay above the minimum wage. Thus a loader, paid by contract, could earn up to 5,000 pesos weekly whereas a sorter, paid by the hour, could never earn more than 1,200 pesos working for the same number of hours (Roldán 1982). While most of the positions in the packing house were temporary jobs, lasting only the six months of the harvest season, the few permanent positions were all held by men.

The main change that has occurred over the past 20 years, as many of the tomato exporting firms expanded to other regions of Mexico to prolong the growing season, is that many of the young women in the packing houses now find employment almost year round. Employers prefer to move this skilled, yet devalued, labour force from site to site in northern Mexico, rather than train new workers in each locale given the potential loss in productivity. While this has resulted in a growing gap in wage levels between the women fieldworkers in the tomato harvest (the large majority of whom are indigenous migrants), and the relatively privileged women employed in the "moving *maquila*" (the majority of whom are mestizo and better educated), the gender wage differentials have not changed much, since occupational segregation has continued (Barndt 2002).

Similarly, in the avocado and mango industry in Mexico, where men make up the majority of harvest workers who pick the fruit off the trees, the tasks associated with the packing houses are clearly differentiated by sex. Men unload the trucks when they arrive from the fields and place the fruit on conveyer belts. Either men (in avocados) or women (in mangos) may monitor the automatic rinsing and drying of the fruit, but then it is women who select the fruit by size, colour and ripeness and pack it in cardboard boxes which they also assemble. The men then load the boxes of fruit onto trucks which are always driven by men (Appendini 2002). While generally paid above the minimum wage, female tasks in the mid-1990s tended to result in an average wage that was 20 per cent lower than the average male wage (Suárez 1995). As elsewhere in Mexico, the degree of compliance with labour regulations varied according to firm size and the type of management, but women workers rarely had written contracts or were paid overtime.

A study of the avocado, mango, cucumber and flower producing enterprises in Mexico found that while the majority of workers were women, they held fewer different occupations than did the men. In the 13 enterprises studied, women were employed in 43 different jobs and men in 65. The exception to this trend was the flower industry, were women were employed in two-thirds of the different jobs (Macías 1997: table 3). The analysis of daily wages earned via the different forms of remuneration revealed that the gender wage gap as a result of occupational segregation was of the order of 88 per cent. As table 9 shows, there was considerable variation by commodity: there was hardly any gender wage gap in the avocado and cucumber packing houses, but a substantial one in the mango and cut flower complexes.<sup>52</sup> Not included here are the salaries of those in supervisor positions, who always earn more than manual workers. Of the 32 supervisor positions in this study only 19 per cent were held by women, and they were concentrated in flower production, the most feminized sector of all (Macías 1997: table 4).<sup>53</sup>

In the Chilean fruit industry, women workers in the packing houses have been reported to earn a slightly higher hourly wage than men (Venegas 1995: table 3). This is primarily because women are concentrated in some of the most highly remunerated piece-rate activities, the cleaning and packing of fruit. In field labour, however, men's

<sup>52</sup> A number of studies also report that the gender wage gap can vary considerably according to the size and level of capitalization of the firm, with the gap being narrower in larger, often foreign-owned firms (Meier 1999).

<sup>53</sup> The only case study that reports a significant number of women owners and professionals in non-traditional agro-export production is for the cut-flower industry in Colombia (Meier 1999).

wages are slightly higher on average than women's. Overall, temporary workers earn more than permanent workers in this industry, although the latter of course work more months and receive social benefits (pension and social security) for which temporary workers do not quality. Moreover, temporary workers do not have the legal right to organize (Bee and Vogel 1997).

Lowell Jarvis and Esperanza Vera-Toscano (2004) also found in their 1992 survey of 690 workers in the tablegrape packing houses that women's average daily wages were higher than men's. They attributed this to the fact

			AL AGRO-EXPORT PRODUCTION, HOUSES, IN CURRENT PESOS)
Product	Female	Male	Female % of male wage
Avocado	21.36	21.68	00

Product	Female	Male	Female % of male wage
Avocado	21.36	21.68	99
Mango	26.33	33.60	78
Cucumber	29.55	30.60	97
Flowers	17.70	22.13	80
Total	23.74	27.00	88

Source: Macías (1997: table 5)

that women were more frequently paid by piece rate (36 per cent of the women versus 14 per cent of the men), and that women's employment was concentrated during the peak harvest season when wages were higher. Nonetheless, in their econometric analysis of male and female earnings they found a gender wage differential on the order of 25 per cent in favour of men once total earnings were adjusted for human capital characteristics, seasonality and the sector of work and form of pay. They attribute this discrimination primarily to the characteristics of employment in other than the packing houses.

Probably the best example of some of the characteristics of high-tech, productive restructuring is found in the flower industry in Colombia, Ecuador and Mexico. Production in the cut flower industry generally takes place in nurseries where workers are assigned a specific physical area that they care for from beginning to end—from the planting of seedlings to the harvest—requiring workers who are particularly adept at multi-tasking. Employment in this industry is overwhelmingly female, with men employed only for the application of fertilizer and herbicides, in equipment maintenance and as supervisors. In Colombia, flower production for export has tended to generate year-round employment, although workers rarely receive all the benefits to which they might otherwise be entitled as permanent workers.<sup>54</sup> In the early 1990s the wage gap between female and male workers in this predominantly female industry was 84 per cent (Silva 1982: table 2).

In the Cayambe region of Ecuador the gender wage gap in the flower industry is reported to be much less than in other types of employment in the northern highlands. While female workers earned an average 5,552 sucres compared with men's 5,626 sucres, in other sectors women earned only 64 per cent of what men did (Newman 2002).

Other studies support the proposition that women's packing-house jobs are among the best available to women, and certainly preferable to work in the fields. In Chile in the late 1970s women in the fruit packing houses averaged US\$114.40 a month, for an average 3.5 months a year. Those engaged in field labour earned US\$83 a month, for an average 3.2 months, while those employed in non-agricultural activities averaged only US\$42.80 a month, working an average of 4.6 months (Aranda 1982:173). In the tomato industry in Mexico, women in the packing houses could earn from US\$13–30 in the highest paid female job of packers; in contrast, field workers earned only US\$5 a day in early 2000 (Brandt 2002).55

<sup>54</sup> The geranium industry in Mexico appears as the exception in the flower industry, for production is reported to last only 5–7 months. Here the male workers have permanent jobs while the 'flexible' female jobs last only for the season, for which they earn only the minimum wage (Appendini 2002).

<sup>55</sup> A study of the women workers in the strawberry industry in Mexico in the late 1970s found that among the women who had worked before being employed in the packing houses (mostly as agricultural wage workers or domestic servants), 77 per cent improved their wages, while 8 per cent saw no change; 17 per cent were earning lower wages, but principally because of their relative inexperience this industry, characterized by piece-rates (Arizpe and Aranda 1981).

Overall, then, there seems to be considerable support for the proposition that occupational segregation by gender in the packing houses serves to maintain lower wages for women, although not always or everywhere. Moreover, most studies find that although women workers in the packing houses for agro-export production might be earning only the minimum wage, they earn more in the packing houses than in any other form of employment, and the gender wage gap in these industries tends to be less than in other pursuits.

V.D.

# wage labour and female empowerment

Women in the packing houses associated with non-traditional agro-export production represent an elite of rural women workers. Not only are wages higher than in other occupations, but the conditions of work are also much better, in that the jobs are indoors so the workers are not exposed to

the elements. These are, however, physically demanding jobs, since most involve standing for hours at a time, and some are hazardous to workers' health, such as those in the flower industry, due to the heavy use of chemicals. They also require that the workers be able to work exceptionally long days during the intense harvest season.

The conditions of employment, as well as employers' preferences, have resulted in most of the jobs in packing houses in Mexico going to young single women with no children. <sup>56</sup> It is difficult for married women, particularly mothers, to work 10 to 16 hour days during the peak season, given their domestic responsibilities. Thus most studies show that married women are often more concentrated in field activities than in the otherwise more lucrative packing-house jobs. <sup>57</sup> As Martha Roldán (1982) argues, women's domestic role and responsibilities qualify labour generically; that is, the incorporation of women into the labour market is not gender-neutral.

Employers also tend to favour the employment of young single women in the packing houses not only because they are a more flexible labour force than married women, but also because young women tend to have a higher level of schooling, making them easier to train and more adaptable to rapidly changing technological processes in highly competitive industries (Lara Flores 1995). Most women workers in the packing houses in Mexico have at least finished primary school (Martínez Medina 1996a; Suárez 1995).

In Chile female temporary workers in the fruit industry are reported to be quite diverse, being of all ages, backgrounds and marital status (Aranda 1982; Bee and Vogel 1997). The available quantitative data for the 1990s, summarized in Barrientos et al. (1999: table 5.2), suggests that in contrast to Mexico, young single women represent a minority of the Chilean workers. In these surveys the majority of female workers were in the age range from 20 to 39; from 47 to 62 per cent were married or living in consensual unions, while from 3 to 16 per cent were widowed or separated. A 1992 survey of workers in the table-grape packing houses found a larger share of women, one-third, who were in this latter category and potential household heads. It also found that 55 per cent of the women

<sup>56</sup> Arizpe and Aranda 1981; Roldán 1982; Becerril 1995; Suárez 1995; Appendini, Suárez and Macías 1997; Barndt 2002; Lara Flores 1998. The exception is Barrón's (1987) study of women in the vegetable packing plants in Jalisco, where the majority of women were married and dispersed among all ages. In contrast, the men employed were concentrated in the 15 to 29 age bracket.

<sup>57</sup> Martínez Medina (1996a) also reports that in Mexico in the 1970s the majority of workers in agro-export production were young single women or older women beyond childbearing years, but that in the 1980s there had been an increase in the number of married women as well as single women with children working in the industry. She relates the latter to the increase in the number of migrant workers from the southern regions of Mexico who migrate and employ themselves as whole families, a trend associated with the economic crisis.

workers were mothers. Moreover, two-thirds of the total had finished their secondary education (Jarvis and Vera-Toscano 2004).

Case studies of the flower industry in Colombia also report that women of all ages are employed, although married women are usually beyond their childbearing years (Silva 1982; Medrano 1982). An early 1980s survey, however, found that almost two-thirds of the women were between the age of 18 and 29 (Meier 1999). In the Dominican Republic in 1990s women of all ages were employed in the packing houses, and three-quarters of the female workers were mothers while one-third were household heads; few had completed primary school (Raynolds 1998). In Guatemala a mid-1980s study found that two-thirds of the female workers in the vegetable packing plants were mothers while 37 per cent were household heads (Blumberg 1994).

A woman's familial position structures the importance of her contribution to household income, and the potential for independent wage work to be a source of her empowerment. While it is difficult to generalize across countries, the broad picture that emerges from the case studies is as follows. Young single women workers tend to supplement household incomes, contributing to the common fund of the household anywhere from zero to their whole wage, with the proportion being inversely related to age. The most frequent situation in Mexico is a young woman contributing around half her wage to the household fund while retaining the other half for her personal expenses, such as clothes, cosmetics, entertainment and sometimes education. Young women's contribution to household expenses tends to be administered by their mothers.<sup>58</sup>

Female household heads are the most dependent on their wage income for basic sustenance, since usually they have limited access to other sources of support. The situation of working wives varies more broadly. In some cases they are also the main source of support for their households, for example if their husbands are incapacitated or are also temporary workers. In a study of the tomato workers in Mexico in the late 1970s it was found that the married women employed in the industry were from the poorest families, and that their wages made up anywhere from 30 to 70 per cent of household income (Roldán 1982). In the study of women workers in the avocado and mango industry in that country it was found that 44 per cent of the women were the main income earners of their families (Suárez 1995).

In Chile, the 1992 survey of women workers in the table-grape packing houses found that 15 per cent of married, 15 per cent of single and 33 per cent of widowed or separated women workers contributed 50 per cent or more of household income (Jarvis and Vera-Toscano 2004: table 4). It is also not unusual for married women's wages to constitute the fund for extraordinary household expenses, such as the purchase of furniture or consumer durables for the home, thus raising the household's standard of living (Bee and Vogel 1997).

In a case study in Guatemala it was found that 77 per cent of the women workers in the vegetable processing industry contributed 50 per cent or more of household income. They earned the minimum wage in a country where few male or female workers earn the official minimum wage. Moreover in 70 per cent of the cases women's wages went for purchases other than meeting bare subsistence needs, such as the purchase of furniture or appliances (Blumberg 1994).

Given the importance of women's wage income and the temporary and precarious nature of their employment in agro-export production, it is not surprising that in many countries a large share of them seek work year-round in other forms of employment, often in multiple sectors. In northern Mexico only a minority are from households with access to land, where work as unremunerated family labour might follow their employment in the packing plants. This type of work is more likely to be available for married women than for those who are single or household heads, who generally seek other wage work, either in the agricultural sector, commerce or the services, or carry out independent own-account activities, even if these activities are less well remunerated than work in the agro-export sector (Roldán 1982). For many young women in Mexico the primary off-season activity tends to be domestic service (Martínez Medina 1996a).<sup>59</sup>

In a study in Chile in the late 1970s it was found that 60 per cent of the female wage workers were employed in at least one other income-earning activity in the off-season of fruit production. Most were engaged in own-account activities ranging from knitting, sewing and washing clothes to commerce. Others were employed in domestic service. Only slightly over a quarter of the sample managed to work 12 months a year, combining all these activities (Aranda 1982). The incomes from this other work were much lower than the earnings in the agro-export sector. In the 1992 survey of women in the packing industry it was found that 50 per cent of them would prefer permanent employment, primarily because they wanted to earn more, "even if the marginal earnings associated with longer employment were low" (Jarvis and Vera-Toscano 2004).

To turn to the implications for women of non-traditional agro-export employment, the main debate in this literature is similar to that regarding women's employment under globalization everywhere: whether it is potentially liberating or highly exploitative of female labour. As Helen Safa (1995) concludes, the relationships between women's participation in wage work, their independent access to and control over income, changes in gender relations and women's awareness of their subordination to men are complex and often contradictory.

The main change created by women's wage work in non-traditional agro-export production is in regions where women had not previously worked as wage workers in traditional agro-export production. In such regions women have often had to overcome male opposition to work outside the home, either as daughters or wives. Doing so has required them to challenge notions of machismo regarding male control of women's mobility and sexuality. Husbands fear that if they allow their wives to work alongside other men it might challenge their fidelity, or that their daughters will be sexually exploited by other men. Women's wage work also challenges the notion of the male breadwinner, the material basis of male authority and household headship. Men fear that if their wives work it will appear that they are incapable of maintaining their family; they also fear that their wives might earn more than they, changing household power dynamics. Not surprisingly, in most regions the employment of female household heads has generally been more socially acceptable initially than the employment of wives.

Bee and Vogel (1997) note that in the case of Chile the resistance to married women's wage work outside the home was partly overcome by the fact that women are only employed in the fruit industry for a few months out of the year. The temporary nature of women's work meant that their domestic responsibilities were only disrupted for part of the year, making their employment more palatable. Moreover, male resistance was finally overcome by the added financial security than an extra wage provided. Jarvis and Vera-Toscano (2004) also suggest that the relative high proportion of female household heads employed in the fruit industry might reflect the fact that women have been able to separate from their husbands or move out of the parental home, precisely because of the relatively high income they earn from temporary wage labour.

<sup>59</sup> A study of several regions of Mexico concluded that the primary factor determining the multiplicity of income-generating activities in which female agroexport workers participated was the general availability of wage work. In the Guanajuato region where vegetable production is carried out year-round, women workers in the packing plants generally found work on peasant farms in the off-season for agro-export production. The women workers were also more likely than the men to pursue local agricultural work (Barrón 1987).

<sup>60</sup> Mummert 1994; Martínez Medina 1996a; Bee and Vogel 1997.

In Colombia, where employment in the flower industry is year-round, Meier (1999) notes that the employment of wives has resulted in a high incidence of domestic violence and family breakdown, contributing to a growth in the proportion of female household heads in this industry. She thus points to the contradictory nature of female employment, that it both enhances the financial security of households and increases conflict within them.

Another important change is that women in non-traditional export production are entering the labour force primarily as independent wage workers rather than as unpaid family labour, as characterized much of harvest labour in the past. This means that they themselves receive a wage and a direct, visible link is established between their labour and their contribution to household income, often enhancing their autonomy and bargaining power within rural households. 61 The process varies depending on a woman's familial position.

Martha Roldán (1982), in her pioneering study of tomato workers in Mexico, found that the main gains for young women wage workers were in terms of their (a) ability to make independent consumption decisions, (b) their greater freedom of movement; and (c) that they had gained the right to choose their own partners. While employed, they rarely had to assume domestic responsibilities, with such work limited to Sundays and days off, since such tasks were usually carried out by their mothers or younger, non-working siblings. Most expected to marry, and their hope was to marry a hard-working man so that they could cease working for a wage. The primary potential change in gender relations gleaned by Roldán was that young women workers were more confident in themselves and tended to expect more from the marriage bargain, giving them what she considers to be "an incipient feminist consciousness" (Roldán 1982:90).

Married women worked in the tomato industry primarily because of economic necessity, and even so, had to convince their husbands to allow them to work. Rarely did husbands assist them in domestic chores; the fortunate ones had daughters who could assume some of the domestic tasks when they worked outside the home. Besides contributing to enhance the household's standard of living, the working wives felt that earning an independent income did give them greater decision-making power within the household, for they alone allocated this income among household expenses. Nonetheless, greater bargaining power came at a high cost, including the double day, physical deterioration and health problems, in addition to guilt for not taking better care of their children. In some cases the husbands even reduced their contribution to household expenses because the wives earned their own income. The working wives were also conscious that a wage gave them the possibility of opting out of the marriage if conditions became too oppressive.

The female household heads were the most independent of all the wage workers studied, since they had no partners, but they were also in the most difficult situation since they had to maintain their households on the basis of their own efforts, year-round. Most had been wage workers before marriage and returned to work once separated or divorced. The hopes of most of these women, as well as many of the married women, were for their daughters' futures: that if they studied, they would be more independent and have a better chance of establishing a marriage based on greater gender equality. Thus Roldán (1982) concludes that in the late 1970s there were already some elements of an ideological transformation in gender roles and norms among the female tomato workers.

Gail Mummert (1994), analysing the changes that have taken place in social views of women's employment in Mexico, notes that when women were first employed in the strawberry packing houses of Michoacán, such

employment was viewed as tantamount to prostitution.<sup>62</sup> Over the last three to four decades the work has become increasingly acceptable, and in many cases necessary, bringing with it wide-ranging changes within the family. She also stresses that the main changes have been in the options available to young women, who now have a more attractive alternative open to them before marriage than migrating to urban areas to work as domestic servants. Wage work in the strawberry industry has also increased their freedom of mobility, as well as their participation in household decisions ranging from labour force participation to migration, marriage and childbearing. While marriage and motherhood is still the main goal of most of the young female wage workers, they are choosing to postpone this and subsequently have fewer children. And some are able to save from their wage earnings to start a small business or to purchase land or a house, enhancing both their alternatives to marriage and their potential economic autonomy as wives.

While female employment in the Mexican strawberry industry tends to be limited to the years before marriage, "generations of salaried labour have spilled over into the home and community", giving all women a wider range of action and an "embryonic" sense of empowerment (Mummert 1994:198). Mummert suggests that the employment of single women has changed the balance of domestic power, since young daughters tend to turn over their salaries to their mothers, who in their spending prioritize household needs, making them less dependent on male income to meet their domestic responsibilities. Moreover, the previous labour market experience of wives has increased their exit options, perhaps contributing toward the increasing proportion of female-headed households. In addition, the large-scale employment of women in this sector has led to changes in the public realm, with women in this region beginning to occupy positions of power as labour recruiters, supervisors and union militants.

Kirsten Appendini (2002), in her summary of the impact of non-traditional agro-export employment on women in Mexico, considers wage work to have both reinforced women's subordination and enhanced their bargaining position within the household. Wage employment has rarely reduced women's responsibility for domestic labour, leaving the gender division of labour within the household relatively unchanged. It is often noted that married women's wage employment leads to their working from 16 to 18 hours a day between production and reproduction, with little if any assistance from their husbands. But women workers often rely on other women for the provision of domestic labour. In her study of women workers in a packing house in Guatemala, Blumberg (1994) found that only 3 per cent of the women workers did their own housework, with domestic chores being carried out by their mothers (if they were young and single), their daughters (if they were older, married women) or by the employment of a domestic worker.

One of the few detailed studies of the impact of female wage employment on domestic labour was carried out in Ecuador. Constance Newman (2002) found that in the households of women wage workers in the cut flower industry, men's hours of domestic labour increased, particularly when both they and their wives worked in the flower industry. But the difference in the double day was indeed marked. For example, in Cayambe men worked 8.5 hours a day in paid labour while women (mostly in the flower industry) worked 10.5 hours; whereas women dedicated an average of 327 minutes to domestic labour, men contributed 62 minutes. This latter figure increased to 71 minutes when both husband and wife worked in the flower industry (Newman 2002:383–4). In sum, as Bee and Vogel (1997) conclude in the case of Chile, "household relations remain largely unchanged" although they have been reworked at the margins in women's favour.

<sup>62</sup> See Arizpe and Aranda (1981) for early views of women's employment in the strawberry industry in this region. At the time they were writing they reported few changes in gender roles as a result of women's employment.

<sup>63</sup> Medrano 1982; Martínez Medina 1996a; Bee and Vogel 1997; Raynolds 1998. Meier (1999) refers to a study carried out among Colombian flower workers in the early 1980s which found that husbands/partners participated in meal preparation in only 4 per cent of households, in cleaning in only 1.3 per cent, and in childcare in 7 per cent.

# the viability of peasant agriculture and its feminization under neoliberalism

Several often overlapping processes over the past 30 years have contributed to changes in the gender division of labour and the tendency towards the feminization of agriculture. First and foremost is the process of social differentiation of the peasantry generally associated with male semi-proletarianization. Depending on the region, this process began in the last quarter of the nineteenth century and gained momentum in the 1960s and 1970s, particularly in regions characterized by relative land shortage given the high population growth rates of that period.

Male participation in temporary wage labour, particularly when it requires seasonal migration, has everywhere been associated with higher female participation rates in agricultural activities, and has given rise to the oftennoted inverse relation between farm size and women's participation in field work.<sup>64</sup> It has as its basis the general flexibility of the gender division of labour in peasant agriculture. Few tasks are strictly "male only" tasks—with perhaps ploughing with a team of oxen being the most common exception. And no matter how rigid the cultural construction of agriculture as a male occupation, women participate in a broad range of field activities when it is required of them, albeit as self-defined "helpers" or secondary workers, given their responsibility for domestic labour.

What seems to distinguish women's participation in peasant agriculture in the neoliberal period is that women's participation is no longer only as "secondary" workers. Rather, in many cases they are emerging as the farm managers and/or the main source of family labour. This change reflects the fact that male absence from the farm is no longer as much conditioned by the labour demands of peasant agriculture (with men migrating to seek wage work only in the off-season of basic grain production) as it is by the imperative to seek off-farm income and the demands of the labour market. The current process of feminization of agriculture is thus associated with an increase in the number of agricultural tasks in which women participate (including traditionally defined maleonly activities), an increase in the total labour time that they dedicate to field work, and their greater participation in agricultural decision-making. Hence, when I use the term 'feminization of agriculture' I am distinguishing it from the normal inverse relation between women's participation in field work and farm size noted above. I argue that it is a phenomenon associated with the lack of viability of peasant agricultural production in the current period.

Besides their general association with falling real wages and rising poverty levels, neoliberal policies have spurred the feminization of agriculture through the withdrawal of the state from direct support to domestic food production, combined with external liberalization. The feminization of agriculture has also been spurred by the decline of traditional agricultural exports as a result of increased international competition. A third process relates to the exceptional case where peasant producers have been able to take advantage of the new conditions for non-traditional agro-export production. This development has increased women's participation in field work, but not necessarily led to an increase in their participation in farm management. Each case will be examined in turn.

<sup>64</sup> On Mexico see Arizpe, Salinas and Velázquez (1989); on Central America, Chiriboga, Grynspan and Pérez (1996); on the Andes, Deere (1976, 1991), Deere and León (1981, 1982) and Faulkner and Lawson (1991); on the Southern Cone, Sisto (1996), Nobre et al. (1998) and Biaggi (1998); as well as Crummett (1987) and the essays in Deere and León (1987).

#### VI.A.

### the withdrawal of the state, liberalization and household food security

The degree of distress of the peasant economy as a result of neoliberal policies largely depends on the extent to which peasant agriculture was previously integrated to markets as a source of supply of basic foodstuffs, and on the degree of state support peasant farmers received in the ISI period. Subsistence producers in countries such

as Mexico, Peru and Bolivia, for example, have been less directly affected by neoliberal agricultural policies than by changes in urban and rural labour markets (Tejo 2001; Crabtree 2002). Those most negatively affected have been the small and medium-sized producers who were the beneficiaries of previous state rural development initiatives and policies that supported domestic food production. Not surprisingly, then, the degree of distress of peasant agriculture is related to the breadth of previous state policies, along with the pace of external liberalization measures. It is these factors that distinguish the cases of Mexico and Brazil.

By far the most voluminous literature on the feminization of agriculture of any country has been generated on Mexico. In contrast, the term has yet to be utilized with respect to family agriculture in Brazil, largely reflecting the factors noted above. From 1970 to 1982 two successive Mexican governments pursued a policy of food sovereignty, investing in the rural social and physical infrastructure, and providing increased access to credit and Green Revolution technology to peasant producers. This made a good proportion of them net commercial producers of basic grains (Preibisch et al. 2002). Thus not surprisingly the stabilization and structural adjustment policies associated with the debt crisis of 1982, combined with the general opening of the economy and dismantling of the network of state institutions that had supported the agricultural sector after 1988, had severe implications for the profitability of peasant agriculture. This was compounded after the implementation of NAFTA by the abrupt increase in imports of US corn, which drove down prices and made the government's compensatory measures wholly inadequate to maintain peasant incomes.

In contrast, agricultural policies in Brazil under ISI were characterized by what has been termed "exclusionary modernization", with state support in the form of subsidized credit and technical assistance in the 1960s and 1970s being largely channelled to large producers that mechanized the production process (Brumer and Tavares Dos Santos 1998). The exclusion of peasant agriculture also mitigated the impact on the Brazilian economy in a period that also saw a more gradual withdrawal of state support to agriculture and the opening to foreign competition. Of the two main crops that have suffered the most from external liberalization in Brazil, wheat and cotton, only the latter is produced in any significant quantity by the peasantry. Perhaps because cotton's production is regionally concentrated, little attention has been given in the literature to the impact of a growing level of imports on the peasant economy. Moreover, in contrast to Mexico, the late 1980s in Brazil were characterized by a growth and strengthening of the various rural social movements. This led in the 1990s to an expansion of programmes targeting family agriculture, in concert with an increased pace of redistributionary agrarian reform under the Cardoso government.

In Brazil, therefore, the process of feminization of agriculture has not been directly associated with neoliberal agricultural policies. Rather, women's responsibility for agricultural production has been regionally concentrated in the northeast, the poorest region of the country and the one with the longest tradition of male long-distance migration and rural female household-headship (Guivant 2003).

<sup>65</sup> It should also be noted that Mexico has a much richer tradition of agrarian studies than Brazil, which also accounts for the much greater attention to rural women and the peasant economy in feminist scholarship in this country.

The feminization of agriculture in Mexico, while already noted in the literature of the late 1970s and early 1980s (Arizpe et al. 1989), is directly associated with the increase in long-distance migration in the decades of the 1980s and 1990s, and particularly with migration from rural areas of Mexico to the United States.<sup>66</sup> Women, particularly married women, emerge as the farm managers when both sons and husbands are absent from the household for considerable periods of time, thus it is not surprising that this phenomenon is associated with long-distance migration by men and the growth of de facto female household headship.

A case study of an indigenous community in the Central highlands of Mexico highlights how the need for increased male long-distance migration and the feminization of agriculture are related to neoliberal policies (Preibisch et al. 2002). Peasants in this region had responded to the favourable policies of the 1970s by becoming net commercial producers of basic grains. The withdrawal of state support reduced the profitability of farming, leading households to increase the number of their members participating in off-farm income-generating activities, particularly outside the agricultural sector. By the 1990s, however, the non-agricultural labour market was also in distress due to the increased competition for employment and declining real wages. By the late 1990s men from this community were migrating to the United States, a new phenomenon in this region.

As in other regions of Mexico, the decline in the profitability of peasant farming—caused by rising input prices and falling crop prices did not immediately lead to a reduction in the acreage planted to maize, but led rather to a reduction in the proportion that was marketed. Whereas maize production had previously been an activity in which both men and women participated jointly, as it became less a source of cash income, it became a female sphere, an extension of women's domestic work. 67 Women began to make most of the decisions regarding production, provided the bulk of the labour and controlled the output.

Preibisch et al. (2002) provide a number of convincing explanations why maize production was not abandoned altogether, the foremost of which is household food security. They also note the multifaceted role of maize in the household economy, with corn stalks providing the main source of fuel in this region and the stored crop representing the savings fund which women use to meet daily expenses, selling small quantities as needed. There is also a strong cultural preference for domestic varieties of corn which result in higher-quality tortillas. Thus maize production might be unprofitable, but it guarantees women's ability to feed their households in a context in which male remittances can not be depended upon, providing an important safety net for household economies. As they also point out, while this process might be empowering for women it also comes at the cost of the intensification of their labour.

In Central America the process of feminization of agriculture has also been related to the withdrawal of the state from support for basic grain production by peasant producers (Chiriboga et al. 1996). As in Mexico, the increasing impoverishment of the peasantry has led to the intensification of family labour, both on and off the farm. Since it is more common for men to seek wage work through long-distance migration, it is usually women who take charge of basic grain production and guarantee the household's food security, a process also related to the high and growing share of female-headed households in the region.

Recent data on Mexican migration to the United States suggest that the tendency towards the feminization of peasant agriculture is probably accelerating. According to a recent Carnegie Endowment study, between 1980

<sup>66</sup> González Montes and Salles 1995; D'Aubeterre Buznego 1995; Lazos Chavero 1995; Marroni de Velázquez 1995; Suárez 1997; Robles 2000; Buechler 2004. 67 Preibisch et al. 2002; Bonfil 1996; Katz 2003.

and 1994 Mexican migration to the United States increased by 95 per cent; between 1980 and 2002 it increased by 452 per cent. Whereas in 1994 19 per cent of Mexican rural migrants were in the United States, by 2002 this figure had risen to 30 per cent (Audley et al. 2003:51). The authors of this report do not attribute this dramatic increase in the number of migrants to NAFTA alone, noting that it was caused by the combined effect of historical migration patterns, the peso crisis of the mid-1990s (which drastically lowered real wages) and the pull of better job opportunities in the United States. But they also note that the Mexican agricultural sector lost 1.3 million jobs between 1994 and 2002, a loss not compensated for by the increase in manufacturing jobs in that country. More research is obviously needed to establish with precision the impact of all these changes on the gender division of labour in rural areas, but my hunch is that the reported job loss in agriculture has been more severe for male than for female workers, and that it has accentuated the feminization of agriculture.

### VI.B.

# the decline of traditional agro-exports

Coffee production is one of the main export crops that is produced both by peasant and large farmers throughout Latin America, with the dominance of crops varying by country. As table 2 shows, between 1979 and 2001 the

value of coffee exports from the region fell 50 per cent, principally because of a 63 per cent fall in the price of coffee over this period. The long-term decline of coffee exports is associated with over-production and increased global competition as well as the breakdown in the late 1980s of the quota system managed by the International Coffee Organization. In countries such as Mexico the crisis for coffee producers, both large and small, has been aggravated by the privatization of many of the state institutions formerly charged with financing, storing and marketing national coffee production.

The impact of the decline of coffee exports has again been studied in most detail in Mexico. Josefina Aranda (2000) provides an excellent case study of the impact on peasant producers in the state of Oaxaca, the third-largest producer in Mexico. Women in this region have always been involved in planting the coffee seedlings and in weeding and harvesting the coffee trees, with mainly men carrying out the other tasks of land preparation, hilling and fertilizing. Women also provided the bulk of the labour for coffee processing, fermenting, washing, depulping the coffee berries prior to their drying and selecting the coffee beans. In recent decades, however, with the mechanization of coffee processing women's post-harvest labour was becoming limited to bean selection.

Aranda describes how the coffee crisis forced growing numbers of men to migrate in search of wage work, bringing about changes in the gender division of labour. The absence of husbands and sons required women to increase their participation in all the tasks associated with coffee production, including those that they did not do before, as well as farm management. Moreover, the decline in the price of coffee had important implications for the local labour market, as female family labour began to replace not only male household labour but also that of the daily wage workers who had previously been contracted for certain tasks. In addition, wages fell so low as a result of the low coffee prices that men refused the available jobs, and they were largely replaced by women smallholders who had no alternative but to seek local wage work. Thus in Oaxaca the coffee crisis resulted in the feminization of both peasant agricultural production and the local wage labour market, often intensely prolonging the working day of rural women.

The only positive aspect of this process as described by Aranda is that peasant women, as the de facto household heads, began representing their households in the main organization of coffee producers and in local movements demanding community services, thus increasing their visibility in the public domain.

### VI.C.

# peasants in non-traditional agro-export production

The most successful cases of peasant incorporation into non-traditional agro-export production are with respect to fruit production in Chile and vegetable production in Guatemala. Both intensified women's field work, but led to widely varying outcomes with respect to women's role in agricultural decision-making.

In Chile an important proportion of the agrarian reform beneficiaries who were favoured by the ability to purchase their parcels of land in the counter-reform were located in the regions of potential expansion of the fruit industry. In the region of Santa María in Aconcagua a good number of beneficiaries received lands already in fruit production, and they initially prospered. According to Maria Soledad Lago and Carlota Olavarría (1982), women in these families were quickly incorporated into field work, often carrying out tasks that had been maleonly in the past. Female family labour was highly valued, since it allowed households to save on the wages that they might have had to pay temporary workers for these same tasks. On average, women in these families began providing between 90 to 140 days a year of field labour. In many cases the expansion of fruit groves led to a reduction in the area dedicated to kitchen gardens, where women had traditionally grown their households' vegetables and herbs. The main change that these authors note in domestic labour compared with other regions of Chile is the simplification of tasks by wives who also work in the fields. 68

The integration of Chile's agrarian reform beneficiaries into the agro-export boom, however, proved ephemeral. The indebtedness associated with the requirement that beneficiaries purchase their parcels of land, as well as the deteriorating conditions for foodstuff production under neoliberalism, resulted in 57 per cent of the beneficiary households selling their land by 1991 (Echenique 1996:88). Even those beneficiaries who were initially able to integrate themselves into Chile's fruit export boom ended up selling their land due to indebtedness, given the high working capital requirements of fruit production, with the main beneficiaries of their sales being agroindustry or medium-sized producers (Murray 2003). Many former beneficiaries and smallholders now form part of the landless wage labour force for fruit production, physically located in urban areas.

In Guatemala vegetable production for export among smallholders began in the early 1980s in the departments of Sacatepequez and Chimaltenango in the central Guatemalan highlands. A late 1980s study in seven municipalities in this region found that the great majority of the women working in the vegetable fields were Kaqchiquel Maya, single and under 25 years of age ( Dary 1991). Slightly over half were working as wage workers for peasant proprietors, while the remainder were either unpaid family workers (39.5 per cent) or direct producers (7.5 per cent). Snow peas, broccoli and cauliflower are particularly labour-intensive crops and require

<sup>68</sup> Whereas peasant women in Santa María often had previous experience in the fruit industry as seasonal wage workers, those in the other region studied by Lago and Olavarría (1982) of Coltauco near Rancagua did not, and they were less likely to be involved in either the maintenance or introduction of fruit groves on either parcels acquired through the agrarian reform or their own properties. Here the gender division of labour suffered few changes.

almost year-round attention. Female wage work is used primarily for the harvest, which might take place three or four days a week over the growing season. Female family labour is used for practically all the different tasks, with the exception of land preparation. The majority of female wage workers work eight hours a day, six days a week. The work of unpaid family workers is less structured, with mothers, for example, working in the fields fewer hours than daughters, given their domestic responsibilities.

According to Dary (1991) it is generally the male household head on these family farms who controls the commercialization of production and the income generated thereby. Unpaid family labour is considered natural since "all family members benefit equally" (Dary 1991:61). The wives explain that their husbands give them the *gasto* (an allowance to purchase basic necessities) while daughters report that their fathers "buy their clothes".

Both Dary (1991) and Blumberg (1994) report that one of the main changes resulting from the expansion of agro-export production is that women are working more now in field work, but have been losing access to the crops that they traditionally marketed, and particularly in the region of Sacatepequez have lost access to land. In this region women traditionally had access to a small garden plot where they grew vegetables and herbs, both for family consumption and for sale in local markets. The income generated from such sales was generally considered a woman's own to dispose of, as often was the income from the sale of her husband's surplus crops, an activity associated with women's greater participation in household decision-making processes. With the introduction of the export crops, women's gardens have been reduced in size or eliminated, while the production of other foodstuffs has also declined. Another change is that women are engaging less in artisan activities, particularly as an income-generating activity, because of the greater demands on their time of agro-export production. Thus both Dary (1991) and Blumberg (1994) conclude that women were negatively affected by the introduction of non-traditional agro-export production, since the reduction in their own independent activities reduced their bargaining power within the household, and they became more dependent on men transferring sufficient funds to them to cover household expenses.

In 1990–91 Elizabeth Katz (1995) undertook a household survey of adopters and non-adopters of non-traditional export crops among Kakchiquel Mayas in this same general region of the central highlands, and also concluded that non-traditional agro-export production was deepening gender inequalities. She found that peasant women were dedicating a significant amount of time to broccoli and snow pea production, but rarely participated in decision-making and received relatively few of the benefits of agro-export production.

Katz gave particular emphasis to the role of woman's landownership in the degree of control of the benefits from commercial production. Only 5 per cent of the total sample of 300 households consisted of single female household heads; 80 per cent of these had access to at least one parcel of land, usually inherited from either their family or their husband. Of these 12 women landowners, seven managed the land on their own, while the others shared control with their sons. Nine women, all widows, held broccoli contracts with firms or intermediaries in their own names and received direct payment for their crops.

<sup>69</sup> In terms of the peasant wage labour market, women are paid less than men for field work and less than the minimum legal wage of Q10 per day. None of the women wage workers interviewed earned more than Q8 daily whereas the men earned between Q8 and Q15. In some cases the wages are not paid directly to the women, but rather to their husbands or fathers, particularly when they are relatives of the peasant proprietors (Dary 1991).

Among married women, less than one-third owned a land parcel. They exerted much less control over management of their land or over the income generated thereby. In 70 per cent of the households the husband decided what crops to plant and made decisions regarding the use of inputs and labour. In only one-fifth of the households with female landowners did the woman control the income generated from commercial production. In the majority of households men owned the land and made most if not all of the decisions regarding production and the use of income.

Katz's research, in contrast to earlier research, suggests that non-traditional export production has not had a significant negative impact on the time that women have available to pursue other income-generating activities. Over half the woman in her sample had pursued some kind of income-generating activity during the previous six months, with the most common activities being artisan work (weaving, embroidering and sewing) and petty trade. Only 7 per cent had engaged in agricultural wage work, these being from land-poor households. Single female household heads were the most likely to engage in income-generating activities, as well as those with daughters over 10 years of age who could act as complements or substitutes for their mothers in domestic labour.<sup>70</sup>

According to Katz the importance of women's separate income to household welfare largely depends on whether the husband provides his wife with income transfers sufficient to meet household needs. In such cases the wife's independent income goes for extras, such as investing in domestic technology; if the transfer is not sufficient, given women's primary responsibility for putting food on the table, her income goes to cover basic necessities. In her detailed analysis of household spending decisions, Katz (1995) found that increasing male agricultural income from non-traditional export production is largely spent on male goods, negatively affecting women's ability to purchase food as well as items that might alleviate the burden of housework.71

The Kaqchiquel region was subsequently restudied in the 1998–2001 period by Hamilton et al. (2001) and Hamilton and Fischer (2003). They conclude that non-traditional agricultural export production has contributed to women's greater role in productive decision-making and, in contrast to Katz (1995) and Blumberg (1994), that they have shared in its benefits. In their 1998 and 2001 surveys over two-thirds of the households reported that women shared or controlled earnings from non-traditional agro-export production. Three-quarters reported that women participated in land use decisions. It is worth noting that in this sample a higher share of women owned land either independently (22 per cent) or jointly with their husbands (29 per cent), bringing the total proportion of women with ownership of land to 51 per cent. Hamilton and Fischer's (2003) regression analysis revealed that women's independent ownership of land and work in non-bulk marketing were significant predictors of women's participation in land use decision-making. Joint ownership of land, however, was not associated with joint decision-making processes.

These studies are not exactly comparable since Katz (1995) did not test the impact of women's land rights on their role in decision-making. Also, in the Hamilton and Fischer (2003) study, the share of women owning land independently and participating in non-bulk marketing is a small share of the total number of women reporting their participation in productive decision-making, suggesting that other factors are also at play.

<sup>70</sup> Katz (1995) similarly reports that besides the amount of land devoted to vegetable production, the presence of a daughter to replace the mother in domestic labour is among the most significant predictors of the amount of time that a woman dedicates to field work.

<sup>71</sup> In another contribution, Katz (2000) investigates the nutritional consequences of non-traditional agro-export production. Her detailed analysis suggests that the male bias in labour and income control under non-traditional agro-export production has not had adverse nutritional consequences. Nonetheless, she finds if that the goal is to improve nutrition, it would be more efficient to target activities in which women controlled the income.

Nonetheless, the increase in the share of female participation in decision-making in roughly the same region suggests that perhaps over time there has been some significant change in gender roles.<sup>72</sup>

In sum, what all these processes illustrate is that rural women are working more in agriculture than ever before. The specific process of feminization of agriculture is related to the decline of agriculture as the primary economic activity of peasant households and male absence from the farm in pursuit of alternative income-generating opportunities, and thus is correlated with the growth in rural female household headship, either *de facto* or *de jure*. As the viability of peasant agriculture is undermined by neoliberal policies, peasant production becomes increasingly oriented towards household food security, becoming an extension of women's domestic responsibilities.

#### VII.

# rural women's access to land and other resources

The process of feminization of agriculture has resulted in women's increased visibility as farmers, and specifically as own-account workers in agriculture. But once again, quantitative data on this phenomenon is sorely lacking. The agricultural censuses are deficient for this purpose, since many do not even ask the sex of the farmer, given cultural norms that have defined farming as a male occupation.

Information on the gender of the principal farmer is only available for three countries for the 1990s. In Paraguay in 1991 women constituted only 9.4 per cent of the principal farmers. In Chile in 1997 women made up 21.9 per cent of the principal farmers and 24.3 per cent of those on owner-operated farms. Peru is the only country for which census data is available for two periods, and it does show a substantial increase in the share of women farmers, from 13.3 per cent in 1972 to 20.3 per cent in 1994. As in Chile, women make up a slightly higher percentage of the principal farmers on owner-operated farms, 20.6 per cent, since women are less likely than men to rent or sharecrop land (Deere and León 2003: table 1; 2001).

Another deficiency of the agricultural censuses is that they do not inquire, in the case of owner-operated farms, who in the household actually owns the land. And up until recently few household surveys pursued this question, with most researchers assuming that the land was the property of the principal farmer—usually the male household head. Table 10 presents recent national data for five countries on the share of landowners who are male, female and couples. The percentage of individual landowners who are female ranges from 11 per cent in Brazil to 27 per cent in Paraguay. Joint ownership of land by couples is an important phenomenon in some countries, such as in Peru, where women are as likely to own land jointly as individually. Joint ownership of land by couples is probably underestimated in the case of Brazil, since this option was not included in the survey questionnaire. Under the prevailing default marital regime in this country (partial community property), land or other assets that are purchased by a couple after marriage legally constitute the joint property of the couple.<sup>73</sup>

<sup>72</sup> Hamilton and Fischer (2003) also report that whereas the share of women's participation in non-traditional agro-export production was positively and significantly correlated with women's participation in decision-making in their 2001 sample, in their 1998 sample it was positively but not significantly correlated, lending weight to the hypothesis that this change is relatively recent.

<sup>73</sup> See Deere and León (2001: chpt. 2) on marital regimes in Latin America and how these define women's property rights in marriage. The Mexican data refers to the ejido sector only and is drawn from the recent land titling programme in that country. In the land titling programme, joint titling of land to couples was not an option, trampling upon married women's property rights.

A comparison of the survey data on land ownership with the census figures on principal farmers suggests that at least in Paraguay and Peru, the two countries for which information on both variables is available, women make up a larger percentage of landowners than they do of principal farmers. But since the agricultural censuses are notorious for underestimating women's work in agriculture, it is difficult to reach any firm conclusions. These household surveys are also deficient in that their questionnaires did not inquire who in the household actually managed agricultural production, making most of the crucial decisions. As Bina Agarwal (1994) has argued, it cannot be assumed that land ownership by itself is sufficient to assure women's control over production and its fruits.74

D	ISTRIBUTION O LATIN AME		WNERS B	
Country	Women	Men	Couple	Total
Brazil (2000)	11.0	89.0		100 n = 39,904
Mexico (2002)	22.4	<i>7</i> 7.6		100 n = 2.9 million
Nicaragua (1995)	15.5	80.9	3.6	100 n = 839
Paraguay (2001)	27.0	69.6	3.2	100 n = 1,694
Peru (2000)	12.7	74.4	12.8	100 n = 1,923

Source: Deere and León (2003: Table 2)

In Deere and León (2003) we investigate the reasons for the gender asset gap in land in Latin America, and conclude that it is related to male preference in inheritance, male privilege in marriage, and male bias in community and state programmes of land distribution, as well as gender bias in the land market. Table 11 demonstrates that there are important gender differences in how land is acquired. Although inheritance of land favours men, inheritance is the principal means by which rural women acquire land.75 Well over half the women landowners in these six countries acquired their land through inheritance, Ecuador being the exception. In this latter country, acquisition via the market slightly exceeded land inheritance for women. The land market is also an important source for land acquisition by women in Brazil and for couples in Peru. What stands out, though, in table 11 is how in every country except Ecuador land purchases are a much more important source of land acquisition for men than for women. Similarly, the acquisition of land via its distribution by communities, as in Mexico and Peru, strongly favours men, as have the agrarian reforms of the past. 76

Deere and León (2003) identify several factors supporting a modest trend towards greater equity for women in the acquisition of land. The reform of civil codes has gradually expanded the property rights of married women and those in consensual unions. The recent adoption of the legal figure of the dual-headed household has enhanced the possibility that assets acquired during marriage will actually be jointly owned and managed. Women's fall-back position has been strengthened since in the case of separation, divorce or widowhood they are now more likely to be able to secure the half of the community property to which they are entitled under most marital regimes. Also, a number of countries have strengthened the inheritance rights of wives so that, in addition to their legal half of the community property, they are entitled to inherit from their husband's estate, along with the children. Growing literacy among rural women has also contributed to growing legal literacy, so that wives and daughters are now more likely to be aware of and claim their legal rights.

<sup>74</sup> Recall Katz's (1995) data on Guatemala presented in the previous section. While one-third of married women owned a land parcel, in only 20 per cent of these cases did women participate in decision-making and control the income generated from agricultural production.

<sup>75</sup> Katz and Chamorro (2003) also report that in their recent household surveys in Nicaragua and Honduras 47 and 57 per cent, respectively, of the women landowners acquired their land through inheritance.

<sup>76</sup> See Deere (1985) and Deere and León (2001: chpt. 3) for a detailed analysis of how women were excluded from the Latin American agrarian reforms of the twentieth century.

Country		Inheritance	Community	State	Market	Other	Total
Brazil	Women Men	54.2 22.0		0.6 1.0	37.4 73.1	7.8 3.9	100 100
Chile	Women Men	84.1 65.4		1.9 2.7	8.1 25.1	5.9 6.8	100 100
Ecuador	Women Men	42.5 34.5		5.0 6.5	44.9 43.3	7.6 15.6	100 100
Mexico	Women Men	81.1 44.7	1.8 14.8	5.3 19.6	8.1 12.0	3. <i>7</i> 8.9	100 100
Nicaragua	Women Men	57.0 32.0		10.0 16.0	33.0 52.0		100 100
Peru	Women Men Couples	75.2 48.7 37.3	1.9 6.3 1.6	5.2 12.4 <i>7.7</i>	16.4 26.6 52.6	1.3 6.0 0.8	100 100 100

Source: Deere and León (2003: Table 3)

There is also evidence that in countries with testamentary freedom, such as Mexico, land inheritance practices are beginning to favour wives over children. This trend is associated with the growing gender gap in life spans (in favour of women) and the decline of familial and community networks that once provided social security to the elderly. In addition, certain trends regarding the inheritance of land by children are favouring gender equity, such as smaller family size and an increase in partible inheritance practices. Greater gender equity in inheritance is also associated with regions where peasant agriculture is in decline, because of acute land shortage and/or unfavourable state policies under neoliberalism. As households can no longer sustain themselves from agricultural production alone, parents are more likely to divide the land among all the children. Growing inheritance of land by daughters is also found in regions where migration has become more balanced by gender, with the choice of who inherits the land being associated with a willingness to remain on the farm, caring for elderly parents (Deere and León 2003).

Access to land via state programmes of land distribution and land titling programmes has also become more gender-equitable over the past decade. As a result of the demands of the women's movement, related to the rise and consolidation of national rural women's organizations in most countries, a growing number of countries have adopted specific mechanisms for the inclusion of women. The most common measure has been the adoption of mandatory joint titling of land to couples either in programmes of state land adjudication (such as in Colombia and Nicaragua in the 1990s and recently in Brazil) or in land titling programmes (the more common state activity in the period of neoliberalism). A few countries have also adopted proactive measures in favour of women, such as the priority given to female household heads in land distribution programmes in Colombia and Nicaragua, and in land titling efforts in Chile.

Nonetheless, Deere and León (2003) conclude that there continues to be a substantial disjuncture between women's legal land rights and their actual ownership of land, a gap unlikely to close via state action because

agrarian reform programmes in most countries have now come to a close. Land titling programmes (which only benefit those who are currently landowners) have been motivated by the neoliberal priority of enlivening land markets. Land markets rarely favour the rural poor (Carter and Barham 1996) nor are they gender-neutral (see table 11). Moreover, even when the state is formally committed to gender equity, women do not necessarily fare very well in land bank programmes or negotiated land reforms.<sup>77</sup>

An additional concern, given the historic discrimination against rural women in terms of access to credit, technical assistance, irrigation and so on, is whether efforts to enliven land markets will result in women landowners disproportionately losing access to their land. The 1994 Peruvian agricultural census (the first in Latin America to collect and publish such data) substantiates the gender gap in access to resources. While neither men nor women were very likely to receive credit, technical assistance or to use improved seed, the share of male farmers with access to these resources always significantly exceeds that of female farmers (Deere and León 2001: table 9.12).78

The available evidence is mixed on whether women landowners are more likely to sell or rent their land than men. A case study of farmers in four ejidos in northern Mexico, a region undergoing a boom in non-traditional agro-export production, found that in 1999 70 per cent of the *ejidatarios* were renting out their lands, many of them as a prelude to selling them. Female land owners were more likely (87 per cent) than male land owners (62 per cent) to rent out their land, a difference that was statistically significant (Lewis 2002). Deere and León's (2003: 938) analysis of land-titling beneficiaries in Chile, however, found that few (2.7 per cent) men or women landowners had rented, sold or ceded their land once it was titled, and that there was no statistically significant difference by gender. Moreover, there was no significant difference by gender in those who planned to sell, rent or cede their land to others in the future.

Given the difficulties women face in becoming successful farmers, and the discouraging prospects for domestic agriculture under neoliberalism, why should women's ownership and access to land be a feminist issue? Deere and León (2003) argue that rural women in Latin America value land ownership for reasons other than the prospect of being successful commercial farmers. Land offers rural women security in covering their family's minimum food requirements. In addition, land is an asset that can be used as collateral, or rented and sharecropped when necessary. Moreover, land ownership gives women bargaining power within the household, family and community. Increasing women's ownership of land is thus important not only to establish real, rather than just formal gender equality, but also because rural women's ownership of land is closely associated with their well-being and empowerment (Agarwal 1994).

There is a growing body of case study literature in Latin America demonstrating that if one compares peasant women landowners with those who are landless, women landowners have a much greater choice of marriage partners and are more likely to strike a strong marriage bargain. Within marriage they play a greater role in household as well as farm decision-making, including production and marketing decisions and the disposition of the income so generated. Women's land ownership has also been associated with a lower incidence of domestic violence, for women landowners are in a much better position to leave an abusive partner and to attract

<sup>77</sup> See Worby (2002) on Guatemala's land bank programme and Deere (2003) on negotiated land reform in Brazil.

<sup>78</sup> See Deere and León (2001:327) for a list of references to the literature demonstrating the disadvantages that female farmers in Latin America face compared with men. Also, see the BID-IICA studies on women food producers summarized in Chiriboga, Grynspan and Pérez (1996) and Kleysen and Campillo (1996). For a comprehensive review of women's disadvantages with respect to water rights and why this matters see Bennett, Dávila-Poblete and Nieves Rico (2004).

another spouse. The ownership of assets gives women additional benefits as they age and/or are widowed, such as potential economic autonomy and greater bargaining power over children (Deere and León 2001). These propositions, however, have only recently begun to be subject to rigorous quantitative analysis.

Hamilton and Fischer (2003) found that women's independent (but not joint) ownership of land in Guatemala was a significant predictor of women's participation in land use decision-making. Katz and Chamorro (2003), in their comparative analysis of Honduras and Nicaragua, found a positive correlation between women's land ownership and their overall role in the household economy, including greater access to credit and control over agricultural income as well as higher shares of own-account and labour market earnings.

Deere et al. (2004) tested for the impact of female land rights on household income levels in Paraguay and Peru, and found a large, positive and significant association between women's land rights and net household income levels in the Peruvian case. In both countries female land rights were negatively associated with the level of farm income, but significantly so only in the case of Paraguay, principally because of the greater disadvantages faced by women farmers in that country. Female land rights were positively associated with higher off-farm income levels, but only significantly so in the case of Peruvian dual-headed households (where both adults were present), where the bargaining power thesis is operative. Female land rights in Peru, evaluated at the mean, increased off-farm income by over 400 per cent and net household income by 47 per cent.

Deere et al. hypothesize that female land rights lead to higher household income levels primarily because the greater bargaining power of women landowners leads to better household decision-making processes, improving the efficiency of labour allocation. Unfortunately, their surveys do not provide direct observations on household decision-making processes. The precise ways in which female land rights contribute to higher off-farm income levels also remain to be analysed. Deere et al. propose that in Peru female land rights might be the factor that makes the difference in rural women being able to pursue high-productivity off-farm activities, in contrast to the low-productivity off-farm activities so often associated with female off-farm employment.

Katz and Chamorro (2003) also tested the impact of female land rights on the intra-household distribution of resources. They show that the enhanced bargaining power of women within the household as a result of their owning land leads to different expenditure patterns, reflecting gender-based preferences. Female land rights in Honduras and Nicaragua lead to small, but positive and significant, increases on expenditures on food and child educational attainment.

These studies have begun to provide firm evidence in support of the proposition that female land rights enhance rural women's well-being and contribute to their economic empowerment. Much work remains to be done, however, since this conclusion may only pertain under certain circumstances. Also, it would be useful to compare the impact on women's bargaining power within the household of women's access to wage income as compared with their ownership of land or other assets. As Cecile Jackson (2003) reminds us, women's land ownership is not necessarily a panacea in all circumstances. But further work largely depends on the generation of more appropriate data sets for gender analysis.

<sup>79</sup> The Brazilian data set only allowed testing for the impact of female land rights on farm revenue, and a significantly negative association was also found (Deere et al. 2004).

### concluding comments

The main trends associated with the economic crisis, neoliberal restructuring and the growth of rural poverty rates in Latin America include a continued diversification of household income strategies, an increase in the number of household members seeking off-farm employment, and the increased participation of rural women as own-

account workers and as wage workers in both the agricultural and non-agricultural sectors. Overall there is good evidence, although stronger for some countries than others, of the feminization of agriculture over the past several decades.

The economic activity rate of rural women in Latin America is now estimated as being of the order of 30 per cent, while women constitute 26 per cent of the rural labour force. I have argued that these figures continue to underestimate the economic participation of rural women, particularly in the agricultural sector, as unpaid family labour, own-account workers and temporary wage workers. Moreover, the measured growth in rural women's activity rates probably reflects the more visible role of rural women in the latter two categories, compared with unpaid family labour.

This growth in the measured activity rate of rural women has taken place in an overall context in which rural–urban as well as international migration appear to be moving towards gender parity (as opposed to the female dominance of the past), bringing rural sex ratios closer to parity in countries such as Mexico and in Central America. Two new phenomena have been the growing participation of rural women in seasonal rural–rural migration, and of urban women in agricultural wage employment.

Household survey data suggest that rural women are more concentrated in non-agricultural activities than are rural men, with approximately half of economically active rural women and only one-third of men in this sector. But there is strong evidence that rural women's participation in agriculture continues to be undercounted, casting doubt on this finding. Although country patterns vary, within the non-agricultural sector there does appear to be a marked gender division of labour in the specific sectors of employment. Rural women tend to be concentrated in the services, commerce and industry while men are concentrated in "other" activities, followed by these sectors. Moreover, there is strong evidence for certain countries that rural women tend to be concentrated in more low-productivity, low-remunerated non-agricultural activities than those carried out by men.

The feminization of the agricultural sector is taking place through two paths, women's increased responsibility for peasant production and their growing participation as wage workers in non-traditional agro-export production. Neither path is well captured by census or survey measures. Moreover, the particular path to feminization of agriculture is location-specific and depends on a myriad of factors, including household-level variables and the gendered nature of local, regional, national and international labour markets, as well as of other income-generating opportunities.

Women's increased visibility as own-account farmers is associated with relative land shortage, a decline in the profitability of peasant agriculture, an increase in the proportion of rural female-headed households and male absence from the farm, caused by either a growth in long-distance migration or more better-remunerated off-farm employment possibilities. This trend is well documented by case studies for Mexico and Central America and by census data for Peru. The feminization of peasant agricultural production may also be a result of a tendency for the inheritance of land to become more gender-equitable as agriculture ceases to be the primary economic activity of peasant households, but this proposition requires much more research.

The feminization of agricultural wage employment is largely due to the fact that the growth in agricultural employment has been limited to non-traditional agro-exports, the most dynamic activity in the era of neoliberalism. The new crops and products are much more labour-intensive than traditional agro-exports, and require a flexible labour force that can be employed only a few months out of the year. In this context, in which few permanent employment opportunities are created, but where the demand for seasonal labour is high, women have become the preferred workers, particularly in the packing houses for vegetable and fruit exports. The case study evidence suggest that women constitute from 40 to 60 per cent of the field labour in these new crops, as well as the overwhelming majority of those employed in the packing houses and in cut flower production.

Women are the preferred workers partly because their socialization has made them into flexible workers, so they are willing to accept short-term, casual employment, and the fact that they are adept in flexibly combining production and reproduction. Gender socialization has also produced the skills (patience, dexterity, submissiveness) in women necessary for high-quality production in extremely competitive markets. As a skilled, but devalued, work force women are cheaper to employ than men and less likely to organize.

The available data on the gender wage gap, however, is mixed. A wage gap in the range of 80 to 90 per cent in agro-export production is frequently cited, although some cases of near gender wage parity have also been noted. While there is little outright discrimination in wage levels when men and women perform the same tasks (generally both working at piece rates), differential earnings by men and women are usually the result of occupational segregation by gender. Men's occupations are more varied than women's and often result in higher average daily or monthly earnings. Men also occupy the vast majority of the permanent and supervisory positions, with women workers having limited opportunities for advancement.

The employment of women in non-traditional agro-exports has resulted in a number of new trends. In many cases it has provided opportunities for women to become independent wage workers, receiving their own wage for the first time. In most cases it has provided an alternative for young women other than rural—urban migration and employment in domestic service. It has added a new spatial dimension to women's employment, as women, particularly from landless or near-landless households, join men in rural—rural migration, following the harvests. It has also brought an increasing number of urban women into agricultural production, even in regions where rural women have traditionally not formed part of the agricultural wage labour force.

The impact of women's wage employment on their empowerment is much debated, with the findings being quite similar to those reported for women working within the *maquila* industry in Latin America. Few studies make outright comparisons between these sectors. In one study that does, for the Dominican Republic, the most coveted jobs for young women are in the *maquila* sector, where the highest wages prevail (Raynolds 1998). Employment in non-traditional agro-exports here, however, is seen as providing a more viable alternative for married, rural women as well as rural female household heads, an alternative that offers them a much higher wage than other rural occupations.

In most countries the jobs in the packing houses are the very highest paying for women, even if their earnings only approximate the minimum wage. Women workers in the packing houses always earn more than women field workers within the same sub-sector. Moreover, there is some evidence that the gender wage gap in the non-traditional agro-export sector is less than in other forms of rural employment.

The impact of women's wage work in non-traditional agro-export production on household gender relations is also mixed, and related to women's familial position. Wage work has given young single women a measure of

economic autonomy, mobility, and often choice over their future marriage partner as well as in the timing of marriage and childbearing. While in most countries young single women tend to be preferred for employment over married women with children, particularly in the packing houses, these jobs have become crucial to the growing number of female household heads. They have perhaps even facilitated a growth in their numbers, by increasing the exit option open to married women in insufferable marriages. The employment of married women, however, has also increased tensions within households as women attempt to exert their greater bargaining power.

It has been shown that in a variety of situations the wages earned by married women can be just as crucial to the sustenance of their households as those earned by female household heads. Where they are not the main income earners of their households, women's wages contribute to significantly enhancing their households's standard of living. There is little evidence, however, that the wage employment of married women has contributed to much change in the gender division of labour within households. Married women workers usually work a double day, unless they have daughters who can replace them, remaining responsible for the vast majority of domestic labour. The main way that wage work has contributed to women's potential empowerment, then, is through the greater bargaining power that their contribution to household income garners them. A number of studies report that married women wage workers have a greater say in household decision-making; in particular they have greater economic autonomy, being able to use their own funds according to their own spending preferences.

As Raynolds (1998:166) concludes, "the process of labour force restructuring which has driven female employment in expanding non-traditional sectors throughout Latin America and the Caribbean does not represent an unqualified economic or political gain for women." She rightly points to how wage work is being redefined as something women must do to support their children without substantial changes in the gender division of labour within households. At the same time, wage employment has bolstered women's ability to negotiate more equitable household relations.

The evidence also suggests that the incorporation of peasants into global markets as producers of non-traditional export products has had mixed results. In Guatemala, the main country in which peasant farmers have been able to sustain a specialization in vegetable production for export, such production has inevitably increased peasant women's workloads. In some cases the expansion of export crops has come at the cost of women's gardens, other income-generating activities, or participation in household and crop decision-making. In other cases, it has been reported that it has led to more equitable gender household relations, with women participating even more in farm and marketing decisions.

Finally, studies on women's ownership and control of land and the difference that these make to their and their household's welfare are still in their infancy. Moreover, no rigorous work has been done comparing how women's bargaining power differs depending on whether their fall-back position consists of land ownership or the possibility of wage employment. This is a promising venue for future research, but one that depends crucially on an improvement in the quality of household surveys.

# appendix I

	ESTI	MATES OF WOM	EN'S EMPLOYMENT IN	TRADITIONAL AGRO-EXPORT	PRODUCTION	
Country						
•	Crop	Locale	Total number*	Proportion of females*	Duration	Source
Mexico						
	Coffee			many	harvest	Martinez M. (1996a)
				many	harvest	Young (1982)
		Оахаса		many	harvest	Aranda (2000)
	Tobacco			many	harvest	Martinez M. (1996a)
		Nayarit		40-60%	harvest	Robles (2000)
	Cotton	,		many	harvest	Martinez M. (1996a)
Dominican Re	epublic					
	Coffee			many	harvest	Mones & Grant (1987
	Tobacco			many	harvest	Mones & Grant (1987
	Peanuts			many	harvest	Mones & Grant (1987
	Cotton			many	harvest	Mones & Grant (1987
Nicaragua				·		
	Coffee			28% (1981)	harvest	CIERA et al. (1987)
				41% (1984–85)		
	Cotton			32% (1981)	harvest	CIERA et al. (1987)
				56% (1984–85)		
Honduras						
	Coffee	Copan	8,314 (1974)	91%	3 months	Buvinic (1982)
	Tobacco	Copan	8,548 (1974)	48%	5.4 months	Buvinic (1982)
Costa Rica						
	Coffee			many	3 months	Buvinic (1982)
Colombia						
	Coffee			many	harvest	Medrano (1980)
	Cotton	El Espinal		many	3-4 months	S Deere & Leon (1981)
Ecuador						
	Coffee	Coast		many	harvest	Martinez (1992)
	Cocoa	Coast		many	harvest	Martinez (1992)
Brazil						
	Coffee			many	harvest	Stolcke (1986)
	Sugar cane	Riberao		many	harvest	Spindel (1987)
	Citrus	Riberao		many	harvest	Ferrante (1995)

Note: \*Years in parentheses.

# appendix II

	=	STIMATES (	OF WOMEN'S	WAGE EMPLOY	MENT IN NONTRADITI	IONAL AGRO-EXPO	RT PRODUC	TION
_					-			_
Country State	Сгор	Take-off	Total	Female	Female	Task	Duration	Source
			number (a)	number (0)	share		(months)	
Mexico								
Sinaloa	tomatoes	1960s		80,000–90,000 (1979–1980)		field & packing	6	Roldan (1982)
					90-95%	packing		
					50-60%	field		
Sinaloa, Baja CA, Jalisco	tomatoes	1970s			80—90% (1990s) many females (1990s)	packing field (indig. migrants)		Barnd† (2002)
Sinaloa	vegetables				90% 40%	packing field (80% migrants)		Lara Flores (1992)
Sinaloa	vegetables		950,000 (1990s)		90%	packing		Lara Flores (1995)
Michoacan	strawberries	1960s			predominantly females (1970s)	packing		Arizpe & Aranda (1981)
					predominantly females (1990s)	packing	6	Lara Flores (1995) Mummert (199
Michoacan	avocados	1970s			50% (1990s)	field & packing	6-10	Suarez (1995) & Appendini (2002
	mangos	1970s			40% (1990s)	field & packing	2-3	
6 states (b)	fruits, vegetables	1970s			50+%	field		Barron (1991) in Collins (1995)
Sonora	grapes	1970s			predominantly females	field		Collins (1995)
Guanajuato	broccolis cauliflowers				many females	field		Martinez Medina (1996a)
Chihuaha	apples				many females	field		Martinez Medina (1996a)
Colima	limes				many females	field		Martinez Medina (1996a)
Aguascalientes	grapes	1970s			many females	field		Crummett (1987)
Nationally	flowers	1980s	6,000–8,000 (1990s)		70–80%	perm, nursery		Lara Flores (1998)
Mexico	flowers	1980s	5,000-6,000		70-80%	nursery		Lara Flores (1998)
	roses	1980s			70%	nursery		Becerril (1995)
Morelos	geraniums	1990s			predominately females	nursery	6	Appendini (2002)
Dominican Republic					•	-		
·	fruits, vegetables	1980s			many females	field		Mones & Grant (1987)
	fruits		10,270 (1989–90)		44%	field & packing		Raynolds (1998)
	vegetables		6,008 (1989–90)		33%	field & packing		
	flowers, plan	ts	677 (1989–90)		65%	field & packing		

	E	STIMATES (	OF WOMEN'S	WAGE EMPLO	OYMENT IN NONTRADITI (CONTINUED)	IONAL AGRO-EXP	PORT PRODUC	TION			
Country											
State	Crop	Take-off	Total number (a)	Female number (a)	Female share	Task	Duration (months)	Source			
osta Rica											
	NTAX		12,430 (1991	)	many females			Thrupp (1995)			
Guatemala											
Sacatepequez	vegetables	1980s			80% (1985)	packing		Dary (1991)			
Sacatepequez				300	75-85% (1985)	1 packing plant	8–9	Blumberg (1994)			
Honduras											
	NTAX		11,887 (1991	)	many females			Thrupp (1995)			
Central America											
	NTAX	1980s			over 50% (1990s)	packing		Thrupp (1995)			
					30% (1990s)	field					
olombia											
Sab. Bogota	flowers	1970s	25,000 (1978	3)	80%	nurseries		Silva (1982)			
Sab. Bogota	flowers		50,000–57,0 (1980s)	00	70–80%	nurseries		Medrano (1982)			
Sab. Bogota	flowers		80,000 (1990	)s)	80%	nurseries		Thrupp (1995)			
Sab. Bogota	flowers		85,000 (1990	))	70%	nurseries		Lara Flores (1995)			
Sab. Bogota	flowers		75,000 (mid-1990s)		60-80%	nurseries		Meier (1999)			
cuador											
	flowers, vegetables	1980s			predominately females	field & packing		Martinez (2002)			
	flowers, vegetables				69% (1991)	field & packing		Thrupp et al. (1995)			
Cayambe Cotacachi	flowers	1990s			many females			Newman (2002)			
Quito, Sto Dom, Guay	asparagus, palm hearts, strawberries, papayas, flowers				many females (1990s)	field & packing		Salamea & Waters (1995)			

### ESTIMATES OF WOMEN'S WAGE EMPLOYMENT IN NONTRADITIONAL AGRO-EXPORT PRODUCTION (CONTINUED)

State	Crop	Take—off	Total number (a)	Female number (a)	Female share	Task	Duration (months)	Source
le								
Central Valley	fruits	1970-1980	Os		predominately females			Collins (1995)
Central Valley	fruits		250,000 (late 1980s)		52%	field & packing		Aranda (1995)
Central Valley	fruits		300,000 (19	90s)				Venegas (1995)
			perm: 40,000	)	5%	packing		
			temp: 260,00	00	52%	field & packing		
Putaendo	peaches	1970s	25,000 (1970s)	5,000	20%	field	6	Aranda (1982)
	nectarines				77% temp	packing	4-6	
					14% perm	packing		
Aconcagua	fruits, vegetables	1920s			F N inc. (1970s)	field & packing	7	Lago & Olavarría (1982)
Rancagua	fruits, vegetables	1960s			F N inc. (1970s)			Lago & Olavarría (1982)
Aconcagua & Talca	fruits, vegetables				predominately females	field & packing		Lago (1987)
Aconcagua	grapes				40%	field	6	Rodriguez (1987) in Collins (19
					many females	field		Valdes (1992) in Collins (1995)
					predominately females (1980s)	packing		
Aconcagua	fruits			70–100,000 (1980s)				Lara Flores (1992)
Aconcagua	fruits		300,000 (1990s)	125,000	52% temp	field & packing		Lara Flores (1995)
Aconcagua	fruits			150,000 (mid-1990s)	temporary	field & packing		Barrientos (1997)
entina								
Neuquen	apples, pears	1920s	30,000	11,000	33%	field & packing		Bendini et al. (1995)
zil								
Sao Francisco	fruits, vegetables	1970s			many females	field		Collins (1993)
Sao Francisco	grapes	1980s			65%	field	11	Collins (1995)
Sao Francisco	grapes, tomatoes	1990s			44%	field & packing		Rufino (2000)

Notes:

(a) Years in parentheses

(b) The six states are Morelos, Hidalgo, Jalisco, SLPotosi, Sonora, Baja

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