



**International Labour Organization
International Programme on the Elimination of Child Labour (IPEC)**

**Ecuador
Child Labour in Flower Plantations:
A Rapid Assessment**

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Preface

Unacceptable forms of exploitation of children at work exist and persist, but they are particularly difficult to research due to their hidden, sometimes illegal or even criminal nature. Slavery, debt bondage, trafficking, sexual exploitation, the use of children in the drug trade and in armed conflict, as well as hazardous work are all defined as Worst Forms of Child Labour. Promoting the Convention (No. 182) concerning the Prohibition and immediate action for the Elimination of the Worst Forms of Child Labour, 1999, is a high priority for the International Labour Organization (ILO). Recommendation (No. 190, Paragraph 5) accompanying the Convention states that “detailed information and statistical data on the nature and extent of child labour should be compiled and kept up to date to serve as a basis for determining priorities for national action for the abolition of child labour, in particular for the prohibition and elimination of its worst forms, as a matter of urgency.” Although there is a body of knowledge, data, and documentation on child labour, there are also still considerable gaps in understanding the variety of forms and conditions in which children work. This is especially true of the worst forms of child labour, which by their very nature are often hidden from public view and scrutiny.

Against this background the ILO, through IPEC/SIMPOC (International Programme on the Elimination of Child Labour/Statistical Information and Monitoring Programme on Child Labour) has carried out 38 rapid assessments of the worst forms of child labour in 19 countries and one border area. The investigations have been made using a new rapid assessment methodology on child labour, elaborated jointly by the ILO and UNICEF¹. The programme was funded by the United States Department of Labor.

The investigations on the worst forms of child labour have explored very sensitive areas including illegal, criminal or immoral activities. The forms of child labour and research locations were carefully chosen by IPEC staff in consultation with IPEC partners. The rapid assessment investigations focused on the following categories of worst forms of child labour: children in bondage; child domestic workers; child soldiers; child trafficking; drug trafficking; hazardous work in commercial agriculture, fishing, garbage dumps, mining and the urban environment; sexual exploitation; and working street children.

To the partners and IPEC colleagues who contributed, through their individual and collective efforts, to the realisation of this report I should like to express our gratitude. The responsibility for opinions expressed in this publication rests solely with the authors and does not imply endorsement by the ILO.

I am sure that the wealth of information contained in this series of reports on the situation of children engaged in the worst forms of child labour around the world will contribute to a deeper understanding and allow us to more clearly focus on the challenges that lie ahead. Most importantly, we hope that the studies will guide policy makers, community leaders, and practitioners to tackle the problem on the ground.



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¹ Investigating Child Labour: Guidelines for Rapid Assessment - A Field Manual, January 2000, a draft to be finalized further to field tests, <http://www.ilo.org/public/english/standards/ipec/simpoc/guides/index.htm>

Executive Summary

Introduction

The modern cultivation of flowers in the Ecuadorian *Sierra*, or highlands, was introduced in 1982 in the vicinity of Puenbo. There are currently more than 2,500 hectares under cultivation, with production concentrated in the provinces of Pichincha, Cotopaxi and Azuay. Flowers are also grown in Guayas, Los Rios, Manabí, Esmeraldas and El Oro, though in lesser quantities.

In the province of Pichincha, the area between the towns of Cayambe and Tabacundo accounts for approximately 70 per cent of the floral production of the province. According to figures provided by Expoflores, in 2000 this region had 730 hectares under cultivation.

Next in descending order after Pichincha are the provinces of Cotopaxi, with 480 hectares, and Azuay, with 182 hectares (2000 figures) under cultivation. The number of workers employed is proportional to the size of the crop and the volume of production.

The two areas investigated—the Cayambe-Tabacundo belt and the province of Cotopaxi—share similar characteristics: good access routes, proximity to the international airport, adequate basic services, access to water for irrigation and unsurpassed climatic conditions in terms of its photoperiod.

The land is divided into smallholdings and large haciendas. The smallholdings present a high rate of erosion, resulting in low productivity. As far as the population is concerned, the Cayambe-Tabacundo belt has historically been characterized by a scarcity of water for irrigation and the conflicts associated with it, in addition to inadequate basic services for residents, low levels of school enrollment, and a high illiteracy rate.

The population is composed primarily of *mestizos* (peasants and indigenous peoples) at various stages of cultural integration. Before the inception of the flower-growing industry, this segment of the population typically presented a high rate of migration, mainly towards the construction and domestic service sectors of the big cities.

In all cases, the illiteracy rate in the parishes investigated exceeds the national average. At the provincial level, Cotopaxi's illiteracy rate is twice the national figure, while Pichincha accounts for slightly more than half. In all cases, and this is true at the national level as well, the number of illiterate women is greater than that of illiterate men, revealing that women over age 15 are disadvantaged in terms of access to education.

In the rural areas of Ecuador, priority has traditionally been given to the education of boys over that of girls, although both sexes generally receive a primary education. The same does not apply to secondary schooling, where the enrollment of girls is infrequent and their numbers negligible.

School enrollment rates by parish are such that, with the exception of males in Cayambe, none of the parishes studied can claim that its residents have, on average, completed primary school.

The establishment of the floral industry's agroindustrial enterprises promoted local development by creating jobs and stimulating the market to such an extent through the increase in currency that theirs became one of the few locations in the country to attract national and international migration.

The flower-growing enterprises introduced capitalistic and modern methods of production. The inclusion of women in the labour market represented a milestone in the history of the peasant family, bringing about a profound change in traditional family development, particularly as regards children.

Activities and methods

In addition to a review of census documents and official demographic information, researchers undertook exhaustive bibliographic research, consulting specialized archives on such subjects as: agronomy, production, exports, job security, environment, childhood, education, community work, community organization, producers' associations, population, health, etc.

They also conducted interviews with qualified informants and established contacts with local community and social actors, as well as with governmental and non-governmental organizations. The total number of interviews breaks down as follows: 11 interviews with international agencies, 19 with NGOs, 17 with peasant and sectorial organizations, 5 with public agencies, 11 with the health sector, 14 with flower growers, 4 with municipal officials, 3 with occupational risk and labour inspection officials, 20 with teachers and 20 with community actors.

Visits were conducted to the International Agricultural Producers and Services Fair "*Agriflor de las Américas 2001*", two plantations in the Cayambe-Tabacundo region and five administrative offices of plantations in this region. Researchers engaged in a total of 150 hours of observation.

Researchers designed a survey to be administered to groups of up to four young persons in order to ascertain their presence at the plantations. The survey was taken at the time and place where the greatest concentration of the target group could be found. The conditions of application were determined on the basis of observations (final number = 24).

In the Cayambe-Tabacundo area, surveys focused on students enrolled in the fourth, fifth, sixth and seventh grade of primary school, as well as those in secondary night school at all levels offered.

A diagnostic battery, consisting of two surveys and the production of a drawing, was administered in the primary schools (686 girls and boys surveyed, with 664 responses to

the first survey, and 529 to the second), while the secondary school students were administered one survey (129 surveyed).

A total of 1,432 surveys were administered and 1,346 valid replies accepted. The total number of children and adolescents surveyed was 839 (686 primary school students, 71 secondary night school students, 58 adolescent night school students, 12 child and 12 adolescent market workers).

In order to establish an entertaining and trusting environment and thereby increase the surveys' effectiveness, researchers created settings consisting of games, dynamics and specific activities geared to the children's age groups and urban or rural origins.

In sampling the schools, two variables were taken into account: the number of students and the type of school (Hispanic or Indigenous). The sample was restricted to schools with more than 100 students and less than 250, since these would have the highest probability of containing the children targeted. In Cotopaxi, the Indigenous-Hispanic variable had to be eliminated since there were no Indigenous schools in the parishes studied.

As for the health evaluation, a cohort study was conducted among a group of 105 previously selected children, who were administered neurological testing and checked for erythrocytic cholinesterase, which is a useful biomarker for analyzing chronic exposure to phosphoric and carbamic pesticides.

In addition, the children's height, weight and head size were measured in order to evaluate their nutritional status. This information was used to calculate the WAZ (weight) and HAZ (height) indices, deviations from which are indicative of a state of malnutrition or of being at risk for it. Readings were established for children only, since they are not considered useful for persons over age 18.

Hemoglobin and hematocrit levels were also analyzed to check for anemia and to rule out possible drops in erythrocyte-embedded cholinesterase due to anemia and not to pesticide exposure.

In order to gain a better understanding of boys' and girls' perception of their daily activities, their health and their quality of life, the pediatric quality-of-life inventory, known as PedsQL, version 4.0 (developed by Varni) was used.

Despite the fact that it had been scheduled, and that there was a definite sample of child workers in the flower-growing enterprises in Cotopaxi from the parishes of the canton of Latacunga, researchers were not able to carry out a similar study there owing to strong opposition from the children's parents. The methodology used to determine the sample was the same as that used for the Cayambe-Tabacundo group.

Findings

Of the primary-school students aged 7 to 15 years who were surveyed, 85.2 per cent in Cotopaxi and 70.1 per cent in Cayambe were responsible for performing reproductive

(domestic labour) and/or productive domestic chores. This work is out of proportion to their ages and exceeds their capabilities in terms of time, responsibility and risks.

In addition to domestic tasks, during the school year 98 per cent of the students in Cayambe and 88.5 per cent of those in Cotopaxi engage in some kind of productive activity. In the two areas studied, formal work decreases during holiday periods.

Researchers found large numbers of secondary-school students and market workers working in the Tabacundo-Cayambe area. Some 89 per cent of secondary-school students under age 18 study and work, whereas among the market workers, only three combine the two activities.

Approximately 11 per cent of the secondary-school students under age 18 study exclusively; among market workers, none surveyed was dedicated solely to studying.¹

Out of all secondary-school students and market workers, 78.2 per cent of the adolescents began working at age 15 or younger, and approximately 88 per cent did so before the age of 18. For those in secondary school, the need to work was linked to studying; whereas among adolescent market workers (most with low educational levels), it was associated with the desire to become independent from their families.

For the primary-school students, the subject was broached from the standpoint of their expectations for work in the future, taking into account the age at which they “began” working and in what branch. Some 67.2 per cent of the children in Cayambe and 70.7 per cent of those in Cotopaxi hoped to begin working at the age of 18. Moreover, in both locations, more than half of the children’s aspirations concerned the flower-growing industry. This contrasts with their current reality, given that 98 per cent and 88.5 per cent, respectively, are working.

Massive numbers of boys and girls work at the plantations. In Cayambe, 84.5 per cent of primary-school students who work do so in flower-growing enterprises. This figure is 43.5 per cent for secondary-school students, and 50 per cent for young people interviewed in the market.

In Cotopaxi, the percentage of boys and girls working in flower growing is lower, involving 44.5 per cent of child workers.

The majority of primary-school children employed in Cotopaxi are between the ages of 9 and 11 years. In Cayambe, the largest segment is the 9-to-13-year-old age group.

With respect to gender distribution, the percentage of girls working in plantations in Cayambe is similar to that of boys in Cotopaxi and vice versa. The explanation for this phenomenon is the lack of alternative sources of employment for girls in Cayambe. As for boys in Cotopaxi, the lumber industry offers numerous and better-remunerated positions for minors, although they demand much more effort.

¹ In order to facilitate comparison between the various samples and to simplify reading the data, some figures corresponding to groups under 100 are expressed as percentages.

In Cayambe-Tabacundo, the participation of secondary-school students and adolescent workers in flower growing is less than that of primary-school students, but much higher than what is officially declared (47 per cent of the minors surveyed). Of the secondary-school students in Cayambe who work in the plantations, 65.5 per cent are male and 34.5 per cent are female.

Three types of employment were observed. The first is working for a subcontractor, or *tercerización*, according to which boys are hired for the construction and repair of greenhouses, or for tasks related to preparing beds, laying out roads or peeling guide stakes. Wages range from US \$20 to 40 per month.

Alternatively, they are hired directly by enterprises to water, graft, till, fumigate, transport flowers and perform post-harvest tasks. Wages range from US \$5 to 100 per month, depending upon the work contracted.

The third modality consists of boys and girls helping a relative employed in flower growing. Since contracts are not for specified periods but rather for tasks, many adults need help in order to meet the quotas assigned within the week, and thus are assisted by a boy or girl in the family, who is paid US \$0 to 10 per month.

None of the three types of employment offers the recommended safety measures or protective clothing. It was also found that some enterprises hired boys and girls solely in exchange for providing them lunch.

The data relating to the primary-school students' hours of work revealed that 28.7 per cent work from 4 to 20 hours per week and that 20.5 per cent work from 16 to 20 hours per week. In many cases, children from both categories work only during the weekend, while others distribute their hours throughout the week after school.

Some 28.7 per cent of boys and girls work less than half time, 20.5 per cent work half time, 18.5 per cent work more than half time and 4.3 per cent work full time or more. Hours spent performing domestic chores and attending school must be added to these figures.

In Cayambe-Tabacundo, during the school year the majority of both boys and girls work part-time hours. Conversely, in Cotopaxi, most boys and girls who work in plantations work half-time schedules. The boys and girls of Cotopaxi who work on flower plantations in combination with academic studies spend more hours per week working.

Although the number of boys and girls who work during holiday periods is reduced to a minimum (except in Cayambe, where their numbers increase), there is a trend among both sexes and in both locations to work a full-time schedule of eight hours or more per day during these periods.

According to the classification of the attached block diagramme, all primary-school students working in the plantations perform activities that jeopardize their health to varying degrees.

As for secondary-school students, the majority are involved in cultivation and post-harvest activities and nearly 10 per cent in fumigating. The girls are employed almost exclusively in post-harvest activities (60 per cent) and cultivation (40 per cent), whereas the boys are involved in all activities.

In Cotopaxi, working conditions are worse than in Cayambe-Tabacundo. The procedure here is for employees and helpers to engage in all productive activities, including fumigation. Employees, not subcontracted workers, or *tercerizados*, prepare the soil and the working days are therefore longer.

Most alarming is the fact that large numbers of young boys and girls are entrusted with fumigating. In the Cotopaxi sample as well, the small children are the ones most frequently found performing this task.

As part of the health evaluation, a total of 105 girls, boys and adolescents aged 9 to 18 years were examined.² Researches drew their sample from two schools and one secondary school in the province of Pichincha.

The most frequent diagnosis was cephalgia (30 per cent of schoolchildren), followed by tremor (32 per cent), migraine (27 per cent) and syncope (15 per cent). In two cases, corresponding to 1.9 per cent of the sample, there were earlier symptoms of possible convulsive crises. There were no findings of peripheral neuropathy, although a few cases presented asymmetric reflexes and diminished sensitivity to vibration.

With respect to the presence of minimum signs, 42 per cent of the children had more than two minimum signs, which is considered to be symptomatic of minor neuronic dysfunction.

The results of the nutritional status evaluation indicated that 11.43 per cent of the boys and girls were at risk for malnutrition and 1.9 per cent were malnourished, according to the WAZ index. According to the HAZ index, 18.1 per cent of the children were at risk for malnutrition and 51.43 were malnourished.

Acetyl cholinesterase levels lower than 3,800 U/l in boys (9) and 3,300 in girls were considered abnormal. In all, eight boys and girls showed a lowered rate, accounting for 7.6 per cent of the sample. The greatest percentage was found among children aged 9 to 13 years: 17 per cent of this age group had low cholinesterase levels (of these, 13 per cent were boys and 4 per cent were girls), while among the 14-to-18-year-old age group, 9 per cent had low cholinesterase levels and all were females.

These findings suggest that contact with neurotoxic substances could be responsible for the appearance of such neurological disturbances as cephalgia and migraine. They could also be causing disturbances in motor control, leading to symptoms of action and postural tremor. There seems to be no correlation to the duration of exposure, since there was a greater incidence in schoolchildren aged 9 to 13 years than in those aged 14 to 18, who,

² Some 18-year-olds were examined during the health evaluation tests.

because they were older, were probably in contact with the substances for longer periods of time.

The burden placed on these children by the productive and reproductive tasks they perform, the complete lack of facilities and time for adequate recreation, the lack of emotional support and the breakdown of the family and society in which they find themselves, do not allow them to dedicate sufficient effort or make adequate progress in their studies.

Malnutrition, fatigue, neurological problems, etc. are partially responsible for problems of concentration, low academic performance and a high repeat rate. The latter—regardless of whether the concern is looking after scarce family resources or the fact that the regulatory age has been exceeded—ultimately results in expelling boys and girls from the educational system.

Health and family conditions, together with children's entry into the consumer market, promote premature employment and fail to stimulate education—a frankly worrisome situation in the two areas studied. In general, researchers found a decrease in secondary-school enrollment rates and little or no collaboration on the part of parents in their children's education.

This situation leads to the conclusion that this is a high-risk group, with little probability of arriving at an optimum level of overall development.

Conclusions

- The flower-growing industries in Ecuador have adopted a hacienda or feudal style approach to production and labour. This has enabled them to take advantage of the concept of on-the-job training, which has become deeply ingrained in workers.
- In the two provinces studied, there are numerous children working in the flower-growing business. If children considered as “helpers” are included, the number of minors working during the school year would approach 80 per cent of the adult workers, or approximately 48,000 individuals.
- Child labour in the flower-growing sector is, in many cases, formal and open; in others, it is clandestine and concealed as “help” to parents or siblings who work.
- The incorporation of children in the production of flowers, in addition to providing low-cost or free labour, also trains them as future employees.
- The integration of the industrial culture with agriculture leads children to be exposed to too much responsibility from a very early age, given the domestic and formal work they perform. This conflicts with their studies and leads to academic underachievement.
- The deterioration of the fabric of society and the formation of gangs affect not only flower-growing areas, but also the country as a whole. This trend stems from the introduction of modern industrial production techniques to agrarian zones, with a complete lack of support or planning with respect to their assimilation.

Recommendations

Any intervention aimed at eliminating child labour in flower growing should take into account the socio-cultural characteristics of the region and the fact that, in some places, it constitutes the only source of employment. This means that under no circumstances should parents' employment be jeopardized, since this would produce an effect contrary to the one being sought.

For a start, it is recommended that the ILO intervene in order to ensure respect for the rights of workers in this sector. This would involve promoting freedom of association, establishing legal hours of work and requiring the payment of overtime, as well as ensuring maximum protection for workers who risk exposure to harmful substances, etc.

The only possible immediate measures to be taken with respect to children would be to help improve their family relations by compensating for the lack of protection and shelter that affects them so profoundly, as well as to promote their education through to its completion.

The full text of this report is available in Spanish at
<http://www.ilo.org/public/spanish/standards/ipecc/simpoc/ecuador/ra/flowers.pdf>