

# Nicaraguan Sugar

*A Macro View of Today's  
Industry*

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## Introduction

The purpose of this report is to provide a macro-industry overview of the Nicaraguan sugar industry. The report will begin with an overview of Nicaraguan sugar, detailing both key historical facts and economic indicators. This section is meant to lay the groundwork and provide context for understanding the main social issues affecting today's industry. The next sections will detail both concerns and best practices in topics such as: environmental, health and safety, freedom of association, child labor, wages and hours, national standards and corporate stewardship. The report will close with a conclusion identifying remaining questions, and a spreadsheet summarizing report findings.

## Overview of the Nicaraguan Sugar Industry

### *History*

Nicaragua has a large quantity of land suitable for the cultivation of agricultural products. The region boasts rich soil created from nearby volcanic activity. More than 300,000 hectares of land is available for the production of diverse products. Currently over 60,000 hectares of this land is being cultivated for sugar<sup>1</sup>.

Sugar cane was first introduced to the region in 1526 under the government of Pedrarias Dávila. Initial sugar harvests were used essentially for local trade and domestic consumption<sup>2</sup>.

By the end of the 18<sup>th</sup> century, Nicaragua began exporting raw sugar abroad. At this time, sugar production began taking place at a national level. Cultivation was centered in the south and southwest regions of the country. These areas consisted of rich soil and experienced high levels of rainfall and adequate temperatures; conditions perfect for sugar production<sup>3</sup>.

Nicaragua's first sugar mill, named Mill San Antonio, was established in 1892 and acquired by Alfredo Pellas of the influential Pellas family<sup>4</sup>. Grupo Pellas would eventually become an extremely influential aspect of social, economic and political life in Nicaragua. As a result of the establishment of Mill San Antonio, the following years saw a dramatic increase in sugar exports. By 1909, Nicaragua had exported 3,600 tons of sugar to Europe and other parts of Central America<sup>5</sup>.

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<sup>1</sup> "La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<sup>2</sup> "Breve Reseña Histórica." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<sup>3</sup> Ibid.

<sup>4</sup> "History." Nicaragua Sugar Estates Limited. Dec 2008 <[www.nicaraguasugar.com](http://www.nicaraguasugar.com)>.

<sup>5</sup> "Breve Reseña Histórica." [...].

Between 1910 and 1915, sugar exports reduced dramatically due to socio-political strife within the country. Once conditions stabilized, the sugar sector began exporting with even more fervor. By 1920, Nicaragua was exporting over 17,000 tons of sugar abroad<sup>6</sup>.

The 1930s saw a dramatic decrease in production with the onslaught of the Great Depression<sup>7</sup>. Despite this break in production, 1935 witnessed the creation of Nicaragua Sugar Estates Limited (NSEL), founded as the owner of the agro-complex Mill San Antonio<sup>8</sup>.

By the 1940s, sugar production rebounded. In 1948, the Guatemalan-based group Pantaleón established Mill Monte Rosa, Nicaragua's second sugar refinery. The mill, located in the northwestern department of Chinandega, had a milling capacity of 7,000 tons of sugar per day<sup>9</sup>.

The 1950s was considered to be the golden decade of Nicaraguan sugar. Technological advances were made in production processes<sup>10</sup>. Upgraded machinery at Mill San Antonio helped to increase milling capacity<sup>11</sup>.

Two more sugar mills were established in the 1960s: Mill Benjamín Zeledón (1960), located in the southern department of Rivas, and Mill Montelimar (1969), located in the department of Managua, just 65 kilometers from the Nicaraguan capital<sup>12</sup>.

Throughout most of the 1980s the sugar industry was nationalized by the central government, under the administration of Daniel Ortega, leader of the Frente Sandinista de Liberación Nacional (FSLN) party. During this period of state regulation, the sugar sector consisted of seven main mills. In addition to the four aforementioned mills were Mill Amalia, Mill Kukra Hill and Mill Victoria de Julio<sup>13</sup>. Due to complex national and international problems, state-run sugar production in the 1980s remained stagnant<sup>14</sup>.

Mill San Antonio was confiscated in 1988 until 1992, when it was given back to the NSEL<sup>15</sup>. It was also at this time that the National Committee of Sugar Producers (CNPA) was founded to oversee, control and promote the corporate Nicaraguan agro-sugar industry<sup>16</sup>. The sugar industry was finally privatized in the early 1990s during the Unión Nacional Opositora (UNO) government under Violeta Barrios de Chamorro. During this decade, three sugar refineries (Amalia, Kukra Hill and Victoria de Julio) shut

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<sup>6</sup> "La industria azucarera y los beneficios económicos." La Jornada: por un periodismo objetivo y pluralista. 26 Oct 2007. Dec 2008 <<http://lajornadanet.com>>.

<sup>7</sup> "Breve Reseña Histórica." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<sup>8</sup> "History." Nicaragua Sugar Estates Limited. Dec 2008 <[www.nicaraguasugar.com](http://www.nicaraguasugar.com)>.

<sup>9</sup> "La industria azucarera y los beneficios económicos." [...].

<sup>10</sup> "Breve Reseña Histórica." [...].

<sup>11</sup> "History." [...].

<sup>12</sup> "La industria azucarera y los beneficios económicos." [...].

<sup>13</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). "Labor Conditions in the Nicaraguan sugar industry". May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

<sup>14</sup> "Breve Reseña Histórica." [...].

<sup>15</sup> "History." [...].

<sup>16</sup> "La industria azucarera y los beneficios económicos." [...].

down due to poor administration, production issues, and decreases in international prices<sup>17</sup>.

Presently, the industry consists of two different types of sugar cane producers. The industrial refineries, or the sugar ingenios, collect and process harvested cane. The four main refineries that operate today are Mill San Antonio, Mill Monte Rosa, Mill Benjamín Zeledón and Mill Montelimar. Figure 1.1 displays a map of the four main sugar refineries in Nicaragua. The Pellas-owned Mill San Antonio is noted to be one of the largest and most technologically modern sugar operations in Central America. Communities surrounding sugar operations are generally smaller rural areas, with an average population of 80,000. These towns are heavily dependent on agricultural sectors for work.<sup>18</sup>

The other type of sugar cane producer in Nicaragua is the independent producer. This producer cultivates sugar in an independent manner, and establishes a relationship with one of the four industrial refineries in order to sell their harvest. According to the CNPA, there were 650 independent cane producers in the industry as of 2005. Most are located in the municipalities of Rivas, Carazo, Nandaime, Chichigalpa, El Viejo, León, Posoltega and San Rafael del Sur. As of July 2003, 50% of the land cultivated for sugar in Nicaragua was industrial-operated, leaving the remaining 50% operated by independent producers<sup>19</sup>. It should also be noted that the majority of independent producers supply Mill San Antonio<sup>20</sup>.

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<sup>17</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). “Labor Conditions in the Nicaraguan sugar industry”. May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

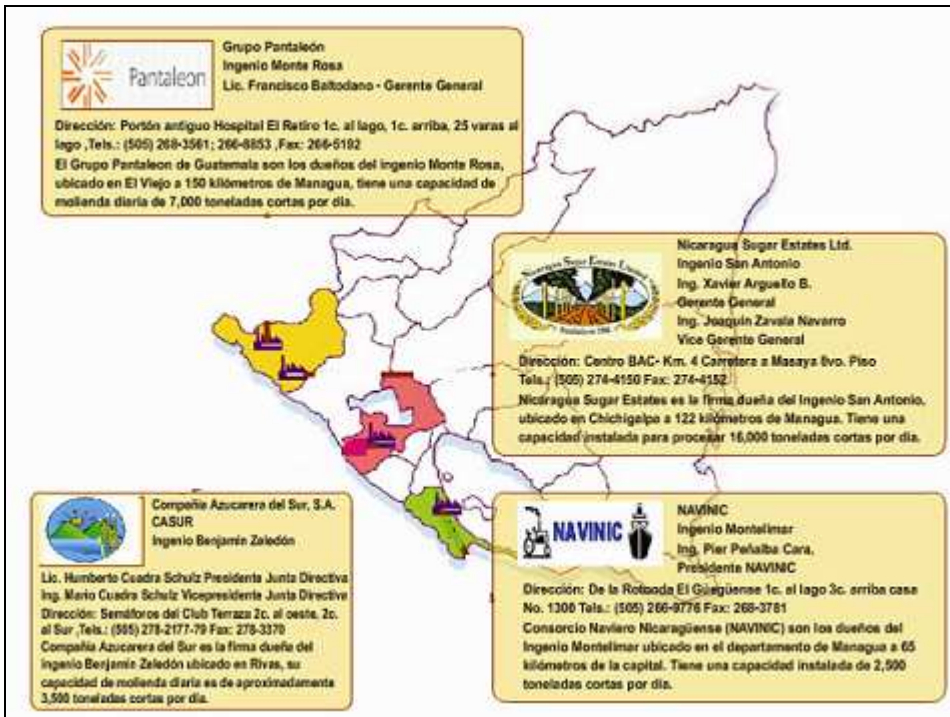
<sup>18</sup> Zavala, Joaquin. Mill Questionnaire. 22 Jan 2009.

<sup>19</sup> López L., José Guillermo. “Comercialización de la Caña de Azúcar en Nicaragua, casos comparativos con Honduras y Costa Rica.” *Proyecto IICA/EPAD*. Jul 2003. Dec 2008 <[www.iica.int.ni](http://www.iica.int.ni)>.

<sup>20</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].



Fig. 1.1: A map of the four main sugar refineries in Nicaragua



Source: “La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país.” Comité Nacional de Productores de Azúcar. 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

Moving into the 21<sup>st</sup> century, the sugar industry is becoming more aware of corporate social responsibility. The industry has understood this concept to mean giving back to its employees, as well as the communities surrounding sugar operations. Health and education programs have been provided to the community, including the construction of major schools and hospital centers<sup>21</sup>.

As a 100 year old industry, Nicaraguan sugar has seen many transformations in technology and processes. Such transformations have led to modifications in labor, environmental and social practices within the industry. In the last 30 years, sugar has become one of the most important sectors of the Nicaraguan economy. It represents a vital source of employment, foreign currency generation and domestic market stimulation<sup>22</sup>. Due to its significant national status, the industry is being scrutinized now more than ever in its ability to maintain sufficient labor, environmental and social standards.

<sup>21</sup> “La industria azucarera y los beneficios económicos.” *La Jornada: por un periodismo objetivo y pluralista*. 26 Oct 2007. Dec 2008 <<http://lajornadanet.com>>.

<sup>22</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). “Labor Conditions in the Nicaraguan sugar industry”. May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

Mario Amador, the general manager of the CNPA, acknowledges that in order to compete in today's international market – the EU, CAFTA-DR and others – the Nicaraguan sugar industry has to sustain high standards of quality and production<sup>23</sup>.

### **Economic Indicators**

The following economic statistics and indicators (as of 2006) characterize the Nicaraguan sugar industry. In addition to the four mills that represent the CNPA, there are more than 650 private sugar cane producers operating in the industry. Sugar as a whole generates over 135,000 jobs, approximately 100,000 indirect and 35,000 direct. The industry represents nearly 4% of Nicaragua's Gross Domestic Product (GDP). Sugar exports in 2006 amounted to nearly \$80 million. During the zafra, or harvest periods, more than 60 megawatts of renewable energy is generated. The industry also engages in the production of ethanol to be used for both domestic and international consumption<sup>24</sup>.

Figure 1.2 displays the export markets of Nicaraguan sugar in harvests between 2003 and 2007. Throughout this time period, Nicaragua has engaged in consistent sugar exports to both Canada and Haiti. Exports to the United States were consistent between 2003 and 2005, and took a considerable dip between 2005 and 2007<sup>25</sup>.

**Fig. 1.2: Nicaraguan Sugar Exports by Destination, Zafras 2003 to 2007**

	<b>Zafra 2003/2004</b>	<b>Zafra 2004/2005</b>	<b>Zafra 2005/2006</b>	<b>Zafra 2006/2007</b>
<b>Canada</b>	86,600	59,128	35,700	67,100
<b>Chile</b>	--	--	--	2,000
<b>China</b>	10,804	56,807	--	--
<b>Dominican Republic</b>	--	--	12,499	--
<b>Ecuador</b>	--	--	--	1,000
<b>Haiti</b>	18,500	23,600	18,850	16,404
<b>Jamaica</b>	--	--	11,250	15,700
<b>Japan</b>	--	18	--	--
<b>Peru</b>	--	--	3,622	15,668
<b>Russia</b>	--	73,650	29,000	--
<b>Taiwan</b>	1,500	--	--	--
<b>United Kingdom</b>	--	--	20,000	--
<b>United States</b>	39,726	46,567	19,169	15,831
<b>Venezuela</b>	--	13,068	--	24,264

<sup>23</sup> “La industria azucarera y los beneficios económicos.” *La Jornada: por un periodismo objetivo y pluralista*. 26 Oct 2007. Dec 2008 <<http://lajornadanet.com>>.

<sup>24</sup> “La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país.” *Comité Nacional de Productores de Azúcar*. 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<sup>25</sup> “Exportaciones de Azúcar por Destino: Zafra 2005/2006.” *Comité Nacional de Productores de Azúcar*. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<b>TOTAL</b>	<b>157,130</b>	<b>272,839</b>	<b>150,090</b>	<b>157,967</b>
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Source: "Exportaciones de Azúcar por Destino: Zafras 2003 a 2007." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

Figure 1.3 displays sugar production statistics by mill for the 2007 to 2008 zafra. The agro-industry complex Mill San Antonio represents the majority of Nicaraguan sugar production, with more than 47% of total production output. As the leader in sugar production, Mill San Antonio covers more land and mills more cane than the other three refineries. Mill Monte Rosa is a close second, followed by Mill Benjamín Zeledón and Mill Montelimar<sup>26</sup>.

Fig. 1.3: Sugar Production Statistics by Mill, Zafra 2007/2008

	MM	San Antonio	Monte Rosa	Benjamín Zeledón	Montelimar	National Total
<b>Harvest Area (owned)</b>	Acres	38,382	29,742	8,461	7,053	83,639
<b>Harvest Area (tenant land)</b>		24,415	20,855	3,239	215	48,724
<b>TOTAL</b>		62,797	50,597	11,700	7,268	132,362
<b>Milled Cane (owned)</b>	Tons	1,531,951	1,102,731	354,797	297,787	3,287,266
<b>Milled Cane (tenant cane)</b>		790,443	748,079	96,334	6,842	1,641,698
<b>TOTAL</b>		2,322,394	1,850,811	451,131	304,629	4,928,965
<b>Processing Capacity</b>	Tons/Day	17,000	15,500	4,000	3,000	39,500
<b>Industry Representation</b>	Percent	47.35%	37.25%	9.32%	6.08%	100.00%
<b>Beginning Zafra Date</b>	--	13-Nov-07	21-Nov-07	20-Nov-07	28-Dec-07	13-Nov-07
<b>Ending Zafra Date</b>	--	22-Apr-08	18-Apr-08	15-May-08	09-May-08	15-May-08

Source: "Datos Finales de Producción: Zafra 2007/2008." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

All four mills produce standard white sugar. Both Mill San Antonio and Mill Monte Rosa produce raw sugar. Only Mill San Antonio produces refined sugar<sup>27</sup>.

Figure 1.4 compares the Nicaraguan sugar industry against the rest of Central America during the 2005 to 2006 zafra. Despite the lowest amount of sugar producers, the Nicaraguan industry was responsible for \$56 million in sugar exports, the third highest in the region.

Fig. 1.4: Central American Sugar, Zafra 2005/2006

	Harvested Land (Hectares)	Number of Sugar Producers	Exports (in \$millions)	Percentage of CA Production (Number of Producers)
Costa Rica	49,000	8,602	37.6	33%
El Salvador	62,000	7,000	58	27%

<sup>26</sup> "Datos Finales de Producción: Zafra 2007/2008." Comité Nacional de Productores de Azúcar. Dec 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

<sup>27</sup> Ibid.



Guatemala	194,000	2,500	457	10%
Honduras	46,000	7,000	32	27%
Nicaragua	62,000	800	56	3%
TOTAL	413,000	25,902	640.6	100%

Source: “La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país.” Comité Nacional de Productores de Azúcar. 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

Positive economic performance concludes that Nicaraguan sugar has moved into the 21st century as a driving agri-business force in the region. It is in this context that the agro-complex Mill San Antonio has been able to flourish. The next section of this report will detail both social issues and best practices that are presently occurring in an industry that, despite its technological and modern characteristics, has some room for improvement.

## Environmental, Health and Safety

### *Chronic Renal Insufficiency*

In July, 2008, former cane workers set up permanent tents and banners in Chichigalpa to increase awareness of the prevalence of kidney disease among cane workers, and to protest Mill San Antonio’s refusal to take responsibility. Protesters had either been diagnosed with the disease, or they had lost a family member to it<sup>28</sup>.

Chronic renal insufficiency (CRI) is a disease of the kidneys. Symptoms of kidney failure are a loss of strength, affected eyesight, reduced appetite and a loss of blood<sup>29</sup>. CRI is diagnosed when blood tests reveal increased levels of creatinine, a substance that indicates kidney malfunction. When treated insufficiently, CRI can lead to death<sup>30</sup>.

According to kidney specialist Edwin Reyes with the Nicaraguan Ministry of Health, nearly 2,000 former and current sugar employees living in the Chichigalpa region – near Mill San Antonio and Mill Monte Rosa – suffer from CRI. This figure was released in July of 2007. Three years earlier, in 2004, there were 800 noted cases of the illness in the region. The Global Nica Foundation estimated that over 560 sugar employees have died of CRI since 1978<sup>31</sup>.

Research studies show that CRI is a common condition in Central America<sup>32</sup>. However, all parties agree that the northwest region of Nicaragua has a questionably high rate of CRI cases<sup>33</sup>. The argument rests in the cause of the disease.

<sup>28</sup> “Nicaraguans demand justice from World Bank-financed sugar cane company.” Covering activism and politics in Latin America. 11 Jul 2008. Dec 2008 <<http://upsidedownworld.org>>.

<sup>29</sup> Bruce, Brad. “La Isla, Nicaragua...” Ethical Sugar. 5 Jul 2007. Dec 2008 <[www.sucre-ethique.org](http://www.sucre-ethique.org)>.

<sup>30</sup> Glaser, Jason. “Sugar Workers Dying from Kidney Failure.” Community, Health, Education and Safety. 31 May 2008. Dec 2008 <<http://thegringo.com>>.

<sup>31</sup> Bruce, Brad. [...].

<sup>32</sup> Glaser, Jason. “Sugar Workers Dying from Kidney Failure.” Community, Health, Education and Safety. 31 May 2008. Dec 2008 <<http://thegringo.com>>.

For people living in surrounding communities, including former cane cutters, the cause of CRI is in the chemicals used at nearby sugar refineries<sup>34</sup>. ASOCHIVIDA, the Association for Chichigalpeños for Life, is a non-governmental organization (NGO) that represents the views of surrounding communities. They attribute high rates of kidney failure among cane cutters to extended exposure to chemicals and fertilizers applied to sugar fields. They argue that when they are applied, the chemicals leak from containers onto the workers' clothing. Chemicals are then seeped into the workers' skin<sup>35</sup>.

In an interview, the governmental kidney specialist, Edwin Reyes, posed the argument that there is a possibility that indigenous Central Americans might be genetically susceptible to kidney disease. He also added that other factors could be cited as reasons for CRI, such as metal substances emitted from nearby volcanoes, homemade alcohol consumption, and also malnutrition. Reyes cites the fact that CRI cases, although at a lesser rate, have also been found outside of Chichigalpa in other sugar and non-sugar regions of Nicaragua<sup>36</sup>.

The government has established a CRI unit based in Chichigalpa. Mill San Antonio reported that they have tried working with the government to investigate possible causes. The mill has also contacted foreign universities for help. Despite this outreach, there has been no study that proves the true cause for the high prevalence of CRI in Chichigalpa<sup>37</sup>.

In 2004, local communities were unsuccessful in pressuring the Nicaraguan government to legally define CRI as an "occupational disease". Such a move would have allowed CRI patients to collect disability payments from the government. Since 2005, 1,100 workers have filed three separate lawsuits against sugar refineries for the careless use of chemicals in sugar processes. These lawsuits have not yet reached the evidence stage. In a separate lawsuit instance, a sugar refinery agreed to a settlement outside of court, in which they made "humanitarian payments" to CRI patients amounting to \$2 million. Hermógenes Martínez, a pastor, father and sugar cane employee who died of CRI in June 2007, had received a humanitarian payment prior to his death totaling \$850<sup>38</sup>.

The Chichigalpa Pro-Life Association is a group of former sugar employees who were reportedly fired for testing positive for kidney failure. The group has since protested the dismissals, and sued, demanding indemnification<sup>39</sup>.

Figure 2.1 displays the number of CRI cases discovered between 1996 and 2001 among the total Nicaraguan population.

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<sup>33</sup> Bruce, Brad. "La Isla, Nicaragua...." *Ethical Sugar*. 5 Jul 2007. Dec 2008 <[www.sucre-ethique.org](http://www.sucre-ethique.org)>.

<sup>34</sup> Ibid.

<sup>35</sup> "Nicaraguans demand justice from World Bank-financed sugar cane company." *Covering activism and politics in Latin America*. 11 Jul 2008. Dec 2008 <<http://upsidedownworld.org>>.

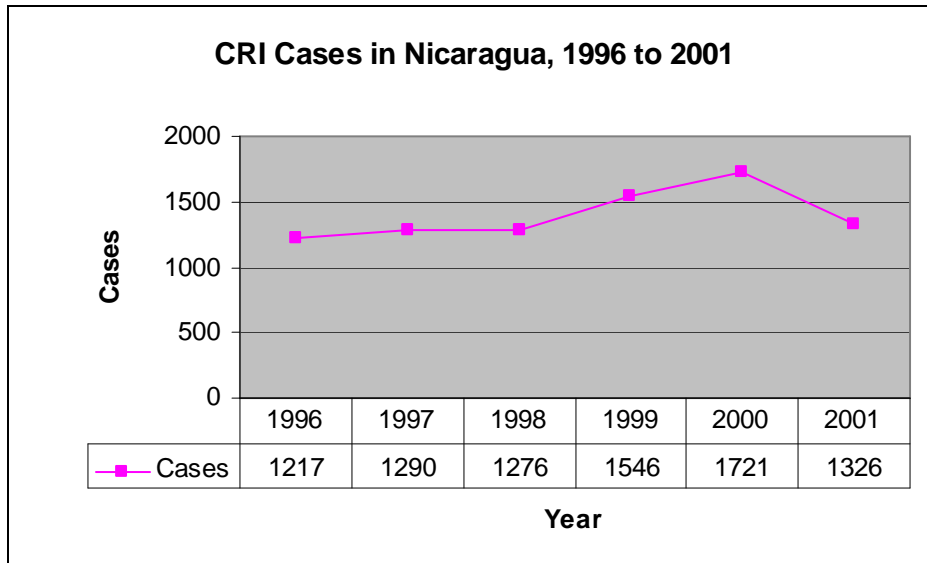
<sup>36</sup> Bruce, Brad. [...].

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Bruce, Brad. "La Isla, Nicaragua...." *Ethical Sugar*. 5 Jul 2007. Dec 2008 <[www.sucre-ethique.org](http://www.sucre-ethique.org)>.

Fig. 2.1: CRI Cases in Nicaragua, 1996 to 2001



Source: “Insuficiencia Renal Crónica en Nicaragua: Descripción de una epidemia silenciosa, 1998-2006.” Salud (IRC en Nicaragua). Jan 2009 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

Figure 2.2 displays the CRI mortality rate by municipality. The largest numbers of CRI-related deaths in 2005 occurred in the departments of León and Chinandega.

Fig. 2.2: CRI Mortality Rate by Nicaraguan Municipality, 2005

Department	Municipality	Total	Department	Municipality	Total
León	León	62	Chinandega	Posoltega	4
Chinandega	Chichigalpa	58	Managua	San Francisco Libre	3
Chinandega	Chinandega	53	León	Santa Rosa del Peñón	3
León	Larreynaga	37	Chinandega	Puerto Morazán	3
Chinandega	El Viejo	28	Carazo	Santa Teresa	3
León	Nagarote	27	Chinandega	San Francisco del Norte	2
León	La Paz Centro	25	León	Quezalaguaque	2
Managua	Tipitapa	18	Rivas	Moyogalpa	2
León	Telica	16	Masaya	Nandasmo	2
Managua	Villa Carlos Fonseca	11	Rivas	Potosí	2
Granada	Nandaime	9	Carazo	La Paz de Carazo	1
Managua	Ticuantepe	8	Chinandega	San Pedro del Norte	1
Managua	San Rafael del Sur	7	Carazo	El Rosario	1
Chinandega	Corinto	6	Chontales	Cuapa	1
León	El Sauce	6	Granada	Diriá	1
Granada	Diriomo	5	Carazo	Dolores	1

Source: “Insuficiencia Renal Crónica en Nicaragua: Descripción de una epidemia silenciosa, 1998-2006.” Salud (IRC en Nicaragua). Jan 2009 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

## **Respiratory Health**

According to Chichigalpa residents, the clouds of smoke and ash produced by the controlled burning of sugar cane is damaging to their respiratory health. There have been reports of partial asphyxiation among community residents<sup>40</sup>.

## **Official Complaint**

In March 2008, the office of the Compliance Advisor Ombudsman (CAO), the internal compliance body within the International Finance Corporation (IFC), received an official complaint prepared by the Center for International Environmental Law (CIEL) and signed by over 670 residents of León and Chinandega, including former sugar mill employees. The complaint alleged that Nicaragua Sugar Estates Limited (NSEL) was negatively impacting the health and livelihoods of nearby communities, as well as the environment. Specific complaints noted include: health injuries, anti-union activity, land acquisition that could impact indigenous communities, as well as environmental impacts such as water contamination, pesticide adulteration and questionable water supply<sup>41</sup>.

This complaint was made after the IFC approved \$55 million for the expansion of NSEL to increase their sugar production and construct an ethanol plant back in October 2006<sup>42</sup>.

By June 2008, CAO had sent a team to assess the area with regards to IFC's own compliance standards involving social and environmental practices. Results from the assessment have not yet been concluded<sup>43</sup>.

## **Contaminated Water**

Mill Montelimar, the refinery with the lowest level of production capacity, is located only 800 meters from the sea coast in San Rafael del Sur, southwest Nicaragua. Due to its close proximity to the coast, mill processes have been scrutinized by both environmental groups and local authorities. These groups have issued complaints regarding the environmental contamination and adulteration of nearby water systems. Nearby communities were reported to be skeptical of the condition of their drinking water supply<sup>44</sup>.

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<sup>40</sup> Miller, Keily. "Sugar-coated Rhetoric." *The Yale Globalist: Politics and Economy*. 25 Apr 2008. Dec 2008 <<http://tyglobalist.org>>.

<sup>41</sup> "Nicaragua: Nicaragua Sugar Estates Limited 01, León and Chinandega." *The Office of the Compliance Advisor/Ombudsman: 2007-2008 Annual Report*. Dec 2008 <[www.cao-ombudsman.org](http://www.cao-ombudsman.org)>.

<sup>42</sup> Genovese, Kris. "Victims of Biofuel: Nicaraguan Communities Affected by IFC-funded ethanol Plant File Complaint." *The Center for International Environmental Law*. 1 Apr 2008. Dec 2008 <[www.ciel.org](http://www.ciel.org)>.

<sup>43</sup> "Nicaragua: Nicaragua Sugar Estates Limited 01, León and Chinandega." [...].

<sup>44</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). "Labor Conditions in the Nicaraguan sugar industry". May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

As stated in the previous sub-section entitled “Official Complaint”, water contamination was listed as a concern in the official complaint sent to the CAO-IFC regarding Mill San Antonio processes. It has been reported that, due to agrochemical application to sugar fields, nearby water supplies, specifically in wells and rivers, are at risk of contamination<sup>45</sup>.

### ***Exposure to Ultra-violet Rays***

In the last eight years, the industry has seen constant pressure to disallow the cutting of sugar cane during midday due to worker exposure to heat and high levels of ultra-violet (UV) rays. Chinandega, near Mill Monte Rosa, is known to have extremely high temperatures, sometimes reaching 40° Celsius, during the zafra season<sup>46</sup>.

Cases of skin cancer and dehydration have been reported in returning field workers that are continuously exposed to UV rays over long periods of time<sup>47</sup>. Because they are paid according to the amount of cane cut, some cutters are driven to work long hours in order to increase their final pay rate<sup>48</sup>. Despite the benefit of higher pay, such long hours increase their exposure to UV rays and compromise their health.

Work shifts have been modified in order to disallow cutters to work during midday. Cutters are able to start at 5AM so they can get much of their workday done prior to midday. They are also able to take rest breaks at their leisure. The industry has attempted to initiate a limit to the amount of cane that can be cut in one workday, in an attempt to limit the amount of time a cutter spends in the field, exposed to extreme temperatures<sup>49</sup>.

In the 1990s, refineries provided Gatorade to field workers in order for them to stay hydrated. This practice was discontinued when management discovered that in some cases, workers would dispose of the drink, or bring it home to their children. Presently, cutters are given a beverage that is specifically formulated to retain hydration<sup>50</sup>.

### ***Medical Services***

Nurse squads are employed in sugar fields during the harvest season. These squads are given portable first aid kits to use while offering medical assistance to field workers.

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<sup>45</sup> Ibid.

<sup>46</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.

<sup>47</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>48</sup> Amador, Mario. [...].

<sup>49</sup> Ibid.

<sup>50</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.



They offer qualified care for minor accidents such as cuts, burns or scrapes that might occur during field work<sup>51</sup>.

Medical services are available at all sugar refineries. The clinic at Mill San Antonio is the largest one of its kind, with numerous in-house medical specialists<sup>52</sup>.

## Freedom of Association

### *Temporary Work and Unions*

There are two different types of workers in Nicaraguan sugar. Permanent employees work year round. These workers are employed in indoor positions within the refinery itself, or in outdoor positions in the sugar fields. Permanent field workers might be employed as tractor drivers or irrigators. The other type of worker in the industry is the temporary worker. These employees work mainly during the zafra. Although some are employed in the refineries, the majority of temporary work is usually found in the fields.

The zafra begins in November, and continues through April, and in some cases, May, depending on the refinery. Because temporary workers are employed within the sugar industry only during these specified months, they generally move on to take other jobs during the rest of the year. Some move to the corn or coffee industries within Nicaragua, whereas others travel to other countries within Central America to seek work<sup>53</sup>.

According to a study carried out by Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF), Mill San Antonio employs approximately 3,000 temporary workers to perform field work during harvest seasons. The study states that the number of permanent field workers at San Antonio amounts to 500, and the number of permanent workers carrying other jobs – in factories, administration, education and safety and hygiene – amounts to around 3,000<sup>54</sup>. According to these figures, temporary work at Mill San Antonio is roughly over 45% of the total workforce.

According to the same study, 280 permanent workers are employed at Mill Monte Rosa. During harvest seasons, over 2,200 temporary employees are hired for field work<sup>55</sup>.

Figures cited in the aforementioned paragraphs were taken from a study performed in 2005. The number of temporary workers in the industry has declined since then. The most recent estimate of temporary workers hired at Mill San Antonio throughout the entire year is roughly 1,500 employees. This decline can be attributed to an industry-

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<sup>51</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). “Labor Conditions in the Nicaraguan sugar industry”. May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

<sup>52</sup> Amador, Mario. [...].

<sup>53</sup> Ibid.

<sup>54</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>55</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). “Labor Conditions in the Nicaraguan sugar industry”. May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

wide transition from manual to automatic cutting<sup>56</sup>. Recent figures show that temporary workers at Mill San Antonio make up 85% and 40% of the field and refinery workforce, respectfully<sup>57</sup>.

Temporary workers are hired via third-party subcontractors. According to the CNPA General Manager Mario Amador, employee information is kept for each temporary worker. Information includes but is not limited to age, marriage status, social security number and citizenship number<sup>58</sup>.

Interaction between management and temporary workers is very low. According to the PASE and ILRF report, there is no direct relationship between temporary workers and management at Mill Monte Rosa<sup>59</sup>. Generally, temporary field workers only communicate regularly with their assigned foreman while performing field work<sup>60</sup>.

According to the study conducted by PASE and ILRF, it is argued that temporary workers in the Nicaraguan sugar industry are less likely to affiliate with a union. Due to the transient nature of their job situation, they are less likely to involve themselves in union associations. Moreover, the labor relation in subcontract work is made between the temporary employee and the third-party contractor. As a result, the study argues, sugar companies are not directly responsible for labor contract provisions. If this is in fact true, the ability for subcontracted workers to collectively bargain for better working conditions is reduced<sup>61</sup>.

The study also cites an overall low level of union participation among temporary workers<sup>62</sup>.

### **Yellow Unions**

PASE and ILRF reported on the existence of “yellow unions” among Nicaraguan sugar refineries. These unions include “employees of confidence” of the mill, including administrative, managerial and/or factory personnel. The report asserts that such unions aid in public communication, responding to questions from the general public and local actors<sup>63</sup>.

### **Child Labor**

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<sup>56</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.

<sup>57</sup> Zavala, Joaquin. Mill Questionnaire. 22 Jan 2009.

<sup>58</sup> Amador, Mario. [...].

<sup>59</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>60</sup> Amador, Mario. [...].

<sup>61</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>62</sup> Ibid.

<sup>63</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). “Labor Conditions in the Nicaraguan sugar industry”. May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

## **Child Labor**

The prevalence of child labor is currently not as significant of an issue in the Nicaraguan sugar industry relative to its Central American counterparts. Mill owners recognize the importance in complying with both national and industry standards regarding this issue<sup>64</sup>.

The youngest age employed by mills is seventeen (17). The industry regulates this age minimum through a system of record verification. Although not all work is compensated through checks (in some cases, plantation work is compensated using cash), employees need a citizenship card to receive their check payment. Nicaraguans do not receive their citizenship cards until they turn seventeen (17) years of age<sup>65</sup>.

In past years, field workers would bring their children to the plantations to assist them in their work. This was a regular occurrence. The practice is now forbidden. If it occurs, plantation foreman will disallow perpetrators to continue working in the fields<sup>66</sup>.

Refineries look towards education in an effort to keep the level of child work on sugar fields as low as possible. During the summer of 2006, Mill Monte Rosa and Fundación Pantaleón donated \$430,000 for the construction of a school at Mill Monte Rosa in El Viejo, Chinandega. The school benefits around 800 pre-school and primary students, 200 adult students, and 300 higher education students studying technical agronomy. The school boasts over 20 classrooms, a library, a staff room, a principal's office, a dining room, and areas for sports and recreation. The majority of students are the children of Mill Monte Rosa workers<sup>67</sup>.

Despite the seemingly low level of child labor in Nicaraguan sugar, the issue remains widespread in the rest of the country, particularly in the informal sector<sup>68</sup>. PASE argues that widespread poverty in the communities surrounding sugar operations, and the subsequent low wages received by community-members, leads to families having no choice but to force their children to work in order to bring in additional income. More often than not, this child work occurs outside of the sugar sector<sup>69</sup>.

## **Wages and Hours**

### **Field Worker Wages**

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<sup>64</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> "Fundación Pantaleón construirá colegio: Hijos de cañeros tendrán un excelente centro educativo." *El Nuevo Diario*. 19 Jun 2006. Jan 2009 <<http://impreso.elnuevodiario.com.ni>>.

<sup>68</sup> "Nicaragua – Country Report on Human Rights Practices 2007." *United States Department of State*. 13 Oct 2008 <<http://www.state.gov/g/drl/rls/hrrpt/>>.

<sup>69</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). "Labor Conditions in the Nicaraguan sugar industry". May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

The minimum wage for agricultural workers is based on set hourly, daily and monthly rates. The current hourly rate for these workers is set at C\$ 5.80<sup>70</sup>.

Sugar industry field workers are paid according to the amount of cane they cut. It is argued that this piece rate system of payment can drive workers to labor in the field for long hours, in the hopes of getting paid a higher rate. As stated in the “Environmental, Health and Safety” section, long hours can lead to increased exposure of extreme temperatures<sup>71</sup>.

Because they are paid at a piece rate, the wages of cutters often differ. According to CNPA general manager Mario Amador, the wages paid to these workers is often much higher than the obligatory minimum wage<sup>72</sup>. However, PASE suggests that this is not always the case. Due to the variant nature of field worker wages, they are not consistently higher than the minimum wage<sup>73</sup>.

### ***Field Worker Hours***

As a reference, Mill San Antonio cane cutters are noted to work an average of six hours daily, and other field workers (irrigators, pest control, etc.) are noted to work an average of eight hours daily during the zafra<sup>74</sup>.

## **National Standards**

### ***The Labor Code of Nicaragua (1996) and Agricultural Work***

Article 202 of the Labor Code of Nicaragua (1996) lists the basic obligations required of all employers that employ agricultural work. This is relevant to those employers in the sugar industry that enter into a labor relationship with field workers.

The following are special employer obligations in relation to agricultural workers:

- a) to supply cooked food to workers, temporary or permanent [...];
- b) to provide housing, bathrooms and latrines that meet conditions of hygiene, safety and ventilation;
- c) to gratuitously supply first aid, mainly for the treatment of animal bites or stings and for any type of sicknesses present in the region;
- d) for cases in which agricultural companies are located outside of the general range of urban schools, and where there is more than 30 children of schooling

<sup>70</sup> Acuerdo Ministerial JCHG-010-09-08, Sobre la Aplicación de los Salarios Mínimos Aprobados por la Comisión Nacional de Salario Mínimo (2008).

<sup>71</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>72</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.

<sup>73</sup> Profesionales para la Auditoría Social Empresarial (PASE) [...].

<sup>74</sup> Zavala, Joaquin. Mill Questionnaire. 22 Jan 2009.

- age, to maintain, in conjunction with the Ministry of Education, a school adequate for primary education;
- e) to supply work tools to workers, who shall return them according to that which is stipulated in the labor contract;
  - f) to supply protective equipment to workers, following the recommendations of hygiene and occupational safety from the Ministry of Labor; and
  - g) to guarantee to farm workers, temporary and permanent, transportation to and from their workplace when the distance is over two or more kilometers<sup>75</sup>.

According to the CNPA general manager Mario Amador, field workers receive balanced food and beverages specifically tailored for outdoor work<sup>76</sup>. Portable bathrooms are placed where sugar cutters are working<sup>77</sup>. Worker housing is provided in nearby towns. The most housing developments are provided at Mill San Antonio and Mill Monte Rosa. However, most of the workers – especially those that are permanent – have their own residences. Bus transportation to and from the workplace is also available for workers<sup>78</sup>.

It should be noted that in addition to these special agricultural dispositions, the agricultural employer is still obligated to comply with the general part of the Labor Code pertaining to work accidents and risks, business licenses and permits, among others<sup>79</sup>.

The labor contract for agricultural work can be made verbally<sup>80</sup>.

### ***Food for Agricultural Workers***

Ministerial Accord JCHG-015-11-08 expounds on the obligation of agricultural companies to provide food for agricultural workers as per article 202, section A of the Labor Code. The accord requires that food provided to agricultural workers be nutritious (following a specific menu provided by the Ministry of Health) and specifies a number of cooks required as per the number of workers present. If employers cannot provide meals to workers, they must pay workers a daily sum equivalent to C\$ 22.50 (USD 1.15) as a substitute<sup>81</sup>.

### ***Sugar Cane Law***

Article 186 of the Labor Code requires the Ministry of Labor to release norms specifying labor standards specific to various industries, including sugar<sup>82</sup>. As of July 2003, there

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<sup>75</sup> The Labor Code of Nicaragua (1996), Art. 202.

<sup>76</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Telephone Interview. 19 Nov 2008.

<sup>77</sup> Zavala, Joaquin. Mill Questionnaire. 22 Jan 2009.

<sup>78</sup> Amador, Mario. [...].

<sup>79</sup> The Labor Code of Nicaragua (1996), Art. 202.

<sup>80</sup> The Labor Code of Nicaragua (1996), Art. 24.

<sup>81</sup> Acuerdo Ministerial JCHG-015-11-08, Sobre la Alimentación para las Personas Trabajadores del Campo (2008).

<sup>82</sup> The Labor Code of Nicaragua (1996), Art. 186.



was no law specifically regulating the production of sugar cane and the sugar industry in Nicaragua<sup>83</sup>.

Although they are not specific to the sugar industry, various obligatory technical norms include dispositions that pertain to sugar production. These various norms offer requirements on processes and methods of production, including the burning of cane, the use of water, the handling of waste water, and others. These norms are regulated by the Ministry of Industrial and Commercial Promotion<sup>84</sup>.

### ***Vitamin A Fortification***

The Technical Norm for Sugar Fortified with Vitamin A (2001) requires producers to fortify their sugar with vitamin A prior to its distribution into the domestic market<sup>85</sup>.

### ***Minimum Wage***

The current minimum wages relevant to the sugar industry are governed by Ministerial Accord JCHG-010-09-08. The current minimum wage for field workers is C\$ 5.80 per hour, C\$ 46.40 per day and C\$ 1,392.15 per month (USD 0.30 per hour, USD 2.38 per day and USD 71.42 per month). The current minimum wage for mill workers is C\$ 8.09 per hour, C\$ 64.73 per day and C\$ 1,941.92 per month (USD 0.42 per hour, USD 3.32 per day and USD 99.63 per month). In addition to a minimum wage, field workers receive an auxiliary payment made for food (referenced in the above sub-section entitled “Food for Agricultural Workers”)<sup>86</sup>.

## **Corporate Stewardship**

The Nicaraguan sugar industry has recently become aware of the notion of corporate social responsibility (CSR). They have understood it to mean programs of corporate stewardship and philanthropic giving. Sugar refineries spend more than US\$ 2 million each year on “CSR programs”. Such programs include collaboration projects with nearby communities, support of health and education campaigns, assistance for rural schools and the creation of hospital and clinic programs that provide health services to the people of local communities<sup>87</sup>. Mills report various donations given to sugar workers

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<sup>83</sup> López L., José Guillermo. “Comercialización de la Caña de Azúcar en Nicaragua, casos comparativos con Honduras y Costa Rica.” Proyecto IICA/EPAD. Jul 2003. Dec 2008 <[www.iica.int.ni](http://www.iica.int.ni)>.

<sup>84</sup> Amador, Mario. General Manager, Comité Nacional de Productores de Azúcar. Electronic Mail. 9 Jan 2009.

<sup>85</sup> Norma Técnica de Azúcar Fortificada con Vitamina “A” (2001).

<sup>86</sup> Acuerdo Ministerial JCHG-010-09-08, Sobre la Aplicación de los Salarios Mínimos Aprobados por la Comisión Nacional de Salario Mínimo (2008).

<sup>87</sup> “La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país.” Comité Nacional de Productores de Azúcar. 2008 <[www.cnpa.com.ni](http://www.cnpa.com.ni)>.

such as school supplies and bicycles for their children<sup>88</sup>. Infrastructure projects are also undertaken, to assist communities in the reparation of schools, the building of roads, and also the reforestation of nearby forestry systems<sup>89</sup>.

As per Nicaraguan law, sugar refineries have also invested over C\$ 30 million (over US\$ 1.5 million) per year in the Vitamin A Fortification program. This program addresses the prevention and control of micronutrient deficiencies in the local population that consume sugar<sup>90</sup>.

### ***Fundación Pantaleón***

Fundación Pantaleón was founded in 1992 as a non-profit philanthropic organization of the Guatemalan sugar mills Pantaleón and Concepción<sup>91</sup>. In addition to operating these two mills in Guatemala, Pantaleón also oversees Mill Monte Rosa. Thus, Fundación Pantaleón's work also reaches Nicaragua. In 2006, the foundation helped to construct a school near Mill Monte Rosa (see the section entitled "Child Labor"). Other Fundación Pantaleón projects include the construction of a maternity house in Chinandega, the awarding of corporate grants and the collection and treatment of trash in Chinandega<sup>92</sup>.

## **Conclusion**

The Nicaraguan sugar industry exists as one of the most advanced in the region. Mill San Antonio is arguably the most technologically modern sugar mill in Central America. Both IFC and Pellas dollars have helped transformed the mill into a modern ethanol producing machine. Its sheer size and volume output out-perform its counterparts both inside and outside of Nicaragua.

Despite the modernity of its agribusiness operations, the Nicaraguan sugar industry still remains on the wrong end of pointed fingers. Currently, a working group sponsored by the IFC is investigating the main cause for increased CRI rates among current and former cane cutters. Environmental groups are issuing complaints about local water supplies. Regardless of the entity at fault, these issues remain un-addressed. The four major sugar refineries are in a perfect position to assist in addressing these issues.

The industry has engaged in numerous displays of corporate giving. Mill Monte Rosa, owned and operated by the Pantaleón family, provided a shining example in 2006 when they embarked on the construction of an educational center, geared specifically towards

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<sup>88</sup> Profesionales para la Auditoría Social Empresarial (PASE) and the International Labor Rights Fund (ILRF). "Labor Conditions in the Nicaraguan sugar industry". May 2005. Dec 2008 <[www.dol.gov](http://www.dol.gov)>.

<sup>89</sup> Zavala, Joaquin. Mill Questionnaire. 22 Jan 2009.

<sup>90</sup> "La Agroindustria Azucarera: El papel del sector azucarero en el desarrollo del país." [...].

<sup>91</sup> "Fundación Pantaleón." Casa Herrera: International Center for Research in the Art and Culture of Mesoamerica. Jan 2009 <[www.finearts.utexas.edu](http://www.finearts.utexas.edu)>.

<sup>92</sup> "Inauguran nuevo CDI "Arcoiris del Futuro"." *El Nuevo Diario*. 12 Feb 2008. Jan 2009 <<http://impreso.elnuevodiario.com.ni>>.

sugar workers and their families. Such efforts have been made as an act of corporate social responsibility.

Although these philanthropic efforts are beneficial to the community, they only address one aspect of what it means to be a responsible corporation. Not only does CSR include community giving, it also includes accountability of internal policies. The well-being of employees within the workplace should not be forgotten. There is room for improvement within the industry in focusing on building internal programs to address the well-being of employees.

If worker health is being compromised due to current procedures, new ways of operating should be brainstormed. Program building geared specifically towards temporary workers could offer greater inclusiveness to these workers. More stringent time shift schedules can be implemented in the fields in order to prevent cane cutters from overworking.

The industry's idea of corporate social responsibility needs to expand to include the implementation of various programs and/or operational changes to address the current issues the industry is facing, as outlined by this report.

## Summary of Report Findings

### Summary of Issues

Issue	Issue Area	Issue Description	Good Practice	Recommendations for Improvement
High levels of chronic renal insufficiency among current and former cane cutters possibly due to agrochemical application	Health & Safety	Recent years have seen a drastic increase in the number of chronic renal insufficiency cases in areas surrounding sugar mill operations. Working groups and non-governmental organizations argue that the extended exposure to agrochemicals and fertilizers applied to sugar fields are causing kidney failure in cane workers. These groups condemn sugar producers for firing cane cutters diagnosed with kidney failure. Other explanations such as genetic vulnerability, domestically-produced alcohol consumption, malnutrition, and exposure to metal materials from nearby volcanoes have been cited by government specialists. Lawsuits have been initiated on the subject. The direct cause remains unknown. The Compliance Advisor Ombudsman of the International Finance Corporation is currently assessing the situation.	Sugar mills have contacted foreign universities to offer insight on possible causes.	<ul style="list-style-type: none"> <li>•Ensure that on-the-job workers are given the best equipment available to protect them from exposure to agrochemicals</li> <li>•Offer medical services dedicated solely to treating chronic renal insufficiency symptoms to all cane workers</li> <li>•Sponsor a working group consisting of academics and medical professionals dedicated to determining the direct cause of chronic renal insufficiency among cane cutters in affected regions</li> </ul>

Respiratory health of nearby community residents affected by the burning of sugar cane	Health & Safety	Residents of nearby communities argue that the smoke and ash produced by the controlled burning of sugar cane is damaging to their respiratory health. There have been reports of partial asphyxiation among residents.	--	<ul style="list-style-type: none"> <li>•Inform both mill/field workers as well as nearby communities of field burning schedules</li> </ul>
Local indigenous communities possibly affected by additional land acquisition	Environmental	The Compliance Advisor Ombudsman of the International Finance Corporation is currently assessing the validity of official complaints by León and Chinandega residents and the Center for International Environmental Law. This complaint includes assessing the effect of additional sugar mill land acquisition on local indigenous communities.	--	--
Contamination of local water supplies possibly due to agrochemical application	Environmental, Health & Safety	Environmental groups and local authorities have issued complaints concerning the drinkable condition of local water supplies, specifically in wells and rivers. These groups cite the use of agrochemicals as an explanation.	--	<ul style="list-style-type: none"> <li>•Sponsor a working group consisting of experienced professionals dedicated to determining the level of contamination of nearby water systems</li> <li>•Offer infrastructure assistance (in the form of improved wells, draining systems, etc.) to affected nearby communities</li> </ul>



<p>Cases of skin cancer and dehydration possibly due to long work hours and the subsequent long exposure to harmful UV rays and extreme temperatures</p>	<p>Health &amp; Safety, Wages and Hours</p>	<p>The industry has seen constant pressure to regulate cane worker hours in order to minimize exposure to harmful UV rays and extreme temperatures. Cases of dehydration and skin cancer among cane workers have been cited. The piece rate system has caused workers to push themselves to the limit.</p>	<p>Work shifts have been modified to not include midday work. Cutters are allowed to take breaks at their leisure. They are provided with a beverage specially formulated to prevent dehydration.</p>	<ul style="list-style-type: none"> <li>•Enforce a strict regimen of shift hours for field workers</li> <li>•Initiate an accurate system of tracking hours worked</li> <li>•Supply field foreman with proper tools and skills needed to fulfill these requirements.</li> <li>•Consider the possibility and feasibility of a non-piece rate system for field workers</li> </ul>
<p>The exclusion of temporary workers in industry possibly due to subcontracting system</p>	<p>Freedom of Association, Hiring Process</p>	<p>A large portion of field work is subcontracted to temporary workers. Some mill workers are also subcontracted. There is a low level of industry engagement (unionization, collective bargaining, etc.) among temporary workers. Exclusion is exacerbated by a low level of interaction between temporary workers and non-foreman workers. Because temporary workers are official employees of their hiring agency, sugar mills are legally not bound to the labor relationship.</p>	<p>A concrete system of information recordkeeping is in place for third-party workers.</p>	<ul style="list-style-type: none"> <li>•Initiate programs for field workers (temporary workers) in an effort to increase their inclusion within the industry - i.e. Recreation programs, training programs, leisure programs, education classes (topics can be numerous - sugar production, work laws, current events, etc.)</li> <li>•Inform field workers (temporary workers) of their right to organize</li> <li>•Offer incentives to field workers (temporary workers) to return next harvest - i.e. shift to permanent status after a certain number of harvests, wage increase for next harvest, etc.</li> <li>•Consider the possibility and feasibility of transitioning to a more sustainable/permanent hiring process</li> </ul>

**Summary of Best Practices**

Best Practice	Best Practice Area	Best Practice Description	Recommendations for Further Improvement
Medical Services	Health & Safety	Nurse squads are employed in plantations during harvest season to attend to any minor medical emergencies. Medical clinics available at sugar mills.	<ul style="list-style-type: none"> <li>•Ensure sufficient medical staff is continuously available in plantations.</li> </ul>
Child Labor Protection	Child Labor	The sugar industry regulates child labor through a sufficient system of recordkeeping. Worker age is verified through citizenship cards. Mills also provide education systems to surrounding communities.	<ul style="list-style-type: none"> <li>•Be aware of child labor outside of the sector, as sugar might be involved indirectly</li> <li>•Ensure living wages for workers so families are not forced to make their child work in other sectors</li> </ul>
Field Worker Wages	Wages and Hours	Wages for field workers are reported to be higher than the legal minimum wage for agricultural workers.	<ul style="list-style-type: none"> <li>•Consider the possibility and feasibility of wage standardization using a non-piece rate system for field workers</li> </ul>
Benefits	National Standards	Field workers receive balanced food and beverages tailored for outdoor agricultural work. Transportation and housing is given to workers who need it. Such benefits are given as per national standard requirements.	--
Corporate Stewardship programs	Corporate Stewardship	The "Corporate Social Responsibility" program of the Comité Nacional de Productores de Azúcar takes on philanthropic projects. These include health and education programs and medical assistance to those in local communities. This is exemplified by Fundación Pantaleón and their sponsorship of a school in Chinandega.	<ul style="list-style-type: none"> <li>•Expand the notion of "Corporate Social Responsibility" to include not just philanthropic acts of giving, but also programs directed towards internal accountability, and the well-being of employees at the workplace</li> </ul>