

## **Sugarcane and Farming Activities: Indicators of Mortality and Retirement**

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This study seeks to present data for mortality and retirement in sugarcane plantations and in farming activities<sup>1</sup> in general in Brazil. The goal is to verify the proportion of workers involved in the various activities who suffer fatal or non-fatal accidents.

The 2009 Annual Report of Social Information (RAIS – Relação Anual de Informações Sociais), published annually by the Ministry of Labor and Employment, was examined for data on deaths and retirement, both for agricultural activities as a whole and in the specific sector of sugarcane. The literature offers few publications on statistical information of indicators of deaths and retirement by sectors of activity<sup>2</sup>.

The data for death rates in Brazil revealed that both sugarcane and showed low mortality rates in 2009<sup>3</sup>. Table 1 summarizes the results.

Of the total of 2,237,524 workers employed in all agricultural activities, 3,072 died, representing 0.137% of the total. Of these, 132 or 0.006% died at work or while travelling to or from their place of employment.

For sugarcane, the total of 526 deaths represented 0.124% of the total 425,027 sector workforce. When we consider only those deaths resulting from work-related accidents and travel, the percentage for sugarcane is extremely low, just 14 in a total of 425,027, which represented 0.003% of the total sector workforce.

The analysis by age group shows that sugarcane had its greatest number of deaths in the 50-64 age range, with 28.5% of the sector total. The same trend could be seen in the other agricultural activities. For sugarcane, the second highest band was 40-49 years, with 24.1% of total sector deaths, followed by the 30-39 year age band (16.3% of the total).

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<sup>1</sup> The data on farming in general excludes the sugarcane sector.

<sup>2</sup> The direct comparison of mortality and accident rates between different activities can have some bias, because of the inability to control other variables, for example the time for which workers in different activities are exposed to risk.. However, in this case, we are comparing only activities of the agricultural sector, and we assume that the risk do not vary so much among them.

<sup>3</sup> This includes all persons who were formally employed in those activities during that year. The term “sugarcane workers” refers only to plantation workers, excluding those employed in related industrial activities, e.g. sugarcane mills.

The RAIS data thus offered no evidence to suggest that sugarcane workers in Brazil die at an early age, or in significant numbers.

Table 1. Brazil: Deaths in farming, excluding sugarcane, and in sugarcane, 2005.

	All farming excluding sugarcane		Sugarcane	
All workers during 2005	2,237,953		425,027	
Total deaths	3.072	0,137% (of all workers)	526	0,124% (of all workers)
Deaths at work or in work-related journey	132	0,006% (of all workers)	14	0,003% (of all workers)
Distribution of deaths by age group, in years  (% of all deaths)	≤ 17	0.2%	≤ 17	0.0%
	18 to 24	8.2%	18 to 24	12.5%
	25 to 29	9.0%	25 to 29	12.4%
	30 to 39	19.5%	30 to 39	16.3%
	40 to 49	23.5%	40 to 49	24.1%
	50 to 64	34.4%	50 to 64	28.5%
	≥ 65	5.3%	≥ 65	6.1%

Source: Elaborated from RAIS (2009)

Regarding the retirement data, Table 2 offers figures for the number of workers in sugarcane and all other areas of farming, showing those who retired during 2009.

Some media reports have suggested that sugarcane plantation workers retire early because of injury. The data in this study does not support this position, as exposed next.

For farming as a whole the total number of pensions granted was 2,374, or 0.106% of the total registered labor force, while for sugarcane the total number of pensions was 503, or 0.118% of the total registered labor force in the sector.

When looking at the distribution of pensions by age group, it should be noted that the greatest proportion of pensions granted in the sugarcane sector was in the 50-64 age band, accounting for 73.2% of the sector total, followed by the 40-49 age band with 16.1% of all pensions. The 65-and-over age band placed third. For the smaller age groups for sugarcane, in the 18-24 age bracket pensions granted represented 0.2% of the total; in the 25-29 age

bracket, pensions granted were 0.6% of all sector pensions granted. In other words, the RAIS data suggests that sugarcane plantation workers as well as agriculture workers do not retire early.

For farming there were 309 pensions granted for sickness or disability in 2009, representing 0.014% of total registered workers that year, while in the sugarcane sector total sickness or disability pensions granted were 20, representing 0.005% of the total.

Both in sugarcane and other agricultural activities, the data suggests that sickness and disability pensions were quite infrequent. The conclusion is that we can reject the suggestion that sugarcane workers retire early. In this sense, sugarcane reflects similar situation as other farming activities.

Table 2. Brazil: Pensions granted in farming, excluding sugarcane, and in sugarcane, 2005

	All farming excluding sugarcane		Sugarcane	
All workers during 2005	2.237.953		425,027	
Total pensions granted	2,374	0.106% (of all workers)	503	0.118% (of all workers)
Pensions granted for sickness or disability	309	0.014% (of all workers)	20	0.005% (of all workers)
Distribution of pensions by age group, in years (% of all pensions)	≤ 17	0.1%	≤ 17	0.0%
	18 to 24	1.2%	18 to 24	0.2%
	25 to 29	1.3%	25 to 29	0.6%
	30 to 39	5.0%	30 to 39	2.2%
	40 to 49	10,5%	40 to 49	16.1%
	50 to 64	66,1%	50 to 64	73.2%
	≥ 65	15,8%	≥ 65	7.8%

When we consider RAIS data for deaths and retirement of employees in the sugarcane sector, we can conclude that it is wrong to suggest that these workers suffer from high mortality or that they retire early.

In the same way, the percentage of pensions granted to sugarcane workers both for length of service and for disability was extremely low in relation to the total number of workers in the sector. Analysis of pensions granted by age group showed that the greatest frequency came amongst older workers, thus contradicting the supposition that sugarcane workers retire at an early age.

We would therefore suggest that any analysis of the sugarcane labor market, in particular one examining indicators for health, mortality and retirement, be placed in the context of the total number of workers involved in the sector, and that the data be compared with the total labor force. Simply using absolute numbers of deaths and retirements distorts an understanding of this market.

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