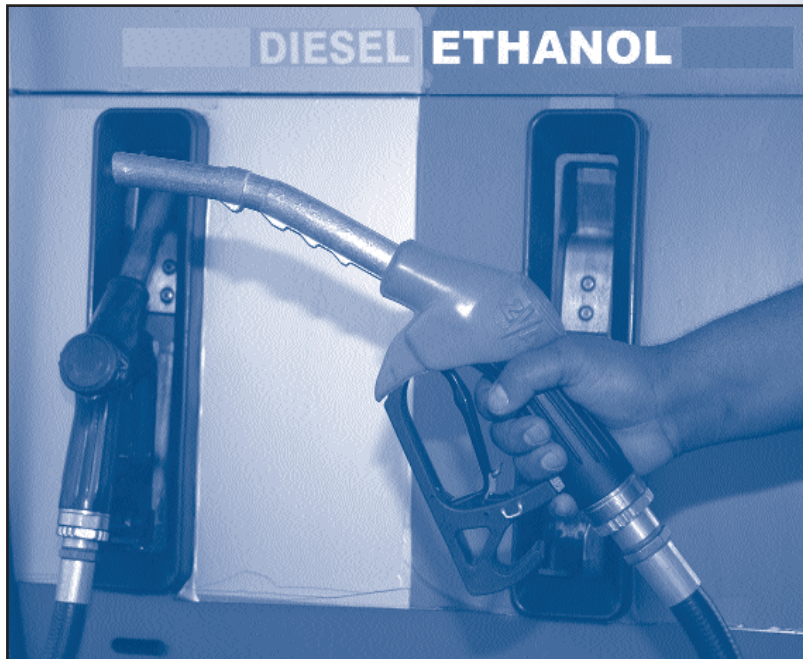


Chapter 4

The Agricultural Sector



RAW CASTER GRANULATED FINE DEMERARA DRY DEMERARA STD DEMERARA LIGHT SOFT BROWN DARK SOFT BROWN LIGHT MUSCOVADO DARK MUSCOVADO COFFEE CRYSTALS MOLASSES

Les 12 Sucres Spéciaux de l'île Maurice
The 12 Special Sugars of Mauritius

RAW CASTER GRANULATED FINE DEMERARA DRY DEMERARA STD DEMERARA LIGHT SOFT BROWN DARK SOFT BROWN LIGHT MUSCOVADO DARK MUSCOVADO COFFEE CRYSTALS MOLASSES

Les 12 Sucres Spéciaux de l'île Maurice
The 12 Special Sugars of Mauritius

The Global Overview

Globalisation, liberalisation and privatisation have had strong effects in the Agricultural sector on all fronts, especially on the international scene. The global market situation of agricultural goods depends on various factors including population and economic growth. It has been seen that over the recent years the growth rates of world agricultural production has slowed. However, this fall is not due to shortages of land or water but rather because demand for agricultural products has also contracted. This is mainly because world population growth rates have been declining since the late 1960s and fairly high levels of food consumption per person are now being reached in many countries (World Agriculture: towards 2015/2030, FAO, 2002 and OECD - FAO, 2006).

Table 4(a): Past and projected growth of agricultural production, demand and trade

	Production		Demand		Gross Exports		Net Imports	
	1984-1994	1994-2005	1984-1994	1994-2005	1984-1994	1994-2005	1994-1984	1994-2005
World	1.7	2	1.8	2	2.5	2.2	NA	NA
Developing Countries	3.6	3	3.7	3	2.3	2.9	3.5	11.9
Developed Countries	0.6	1.1	1	0.7	NA	NA	-1	3.3
Economies in Transition	1.9	0.3	-2.1	0.4	NA	NA	-9.8	5.8

Source: *Medium-term prospects for agricultural commodities: Agricultural commodity projections to 2005*, FAO (1999)

Table 4(a) shows that in the world, as compared to 1984-1994, in 1994-2005 the growth of agricultural production and demand is expected to increase while that of gross exports is expected to decrease. It can also be seen that the agricultural trade position of developing countries is expected to deteriorate given that they are likely as a whole to be net importers of agricultural products in 2005 (FAO, 1999).

For economies in transition and developed countries, it is observed that their net imports show a positive growth rate in 1994-2005 as compared to the previous ten years.

Table 4(b): GDP growth (% per annum)

	1997-99 to 2015 total	2015 to 2030 total	1997-99 to 2015 per capita	2015 to 2030 per capita
World	3.5	3.8	2.3	2.9
Developing countries	5.1	5.5	3.7	4.4
Industrial countries	3	3	2.6	2.8
Transition countries	3.7	4	4	4.3

Source: World Agriculture: towards 2015/2030, Summary Report, FAO (2002)

Table 4(b) indicates that by 2030, the GDP growth per capita in the world is expected to increase for all countries while the GDP growth for industrial countries is expected to increase at a constant rate.

Table 4(c): Growth in demand for agricultural products (% per annum)

	1969 to 1999	1979 to 1999	1989 to 1999	1997-1999 to 2015	2015 to 2030
World	2.2	2.1	2	1.6	1.4
Developing countries	3.7	3.7	4	2.2	1.7
Industrial countries	1.1	1	1	0.7	0.6
Transition countries	-0.2	-1.7	-4.4	0.5	0.4

Source: World Agriculture: towards 2015/2030, Summary Report, FAO (2002)

Table 4(c) shows the past and projected growth in demand for agricultural products. It is seen that as compared to 1989-1999, in 1997-1999 to 2015, the growth in demand for agricultural products is projected to decrease for all countries except transition economies while the projected figures for 2015 to 2030 for invariably all countries is expected to decline as compared to years 1997-99 to 2015.

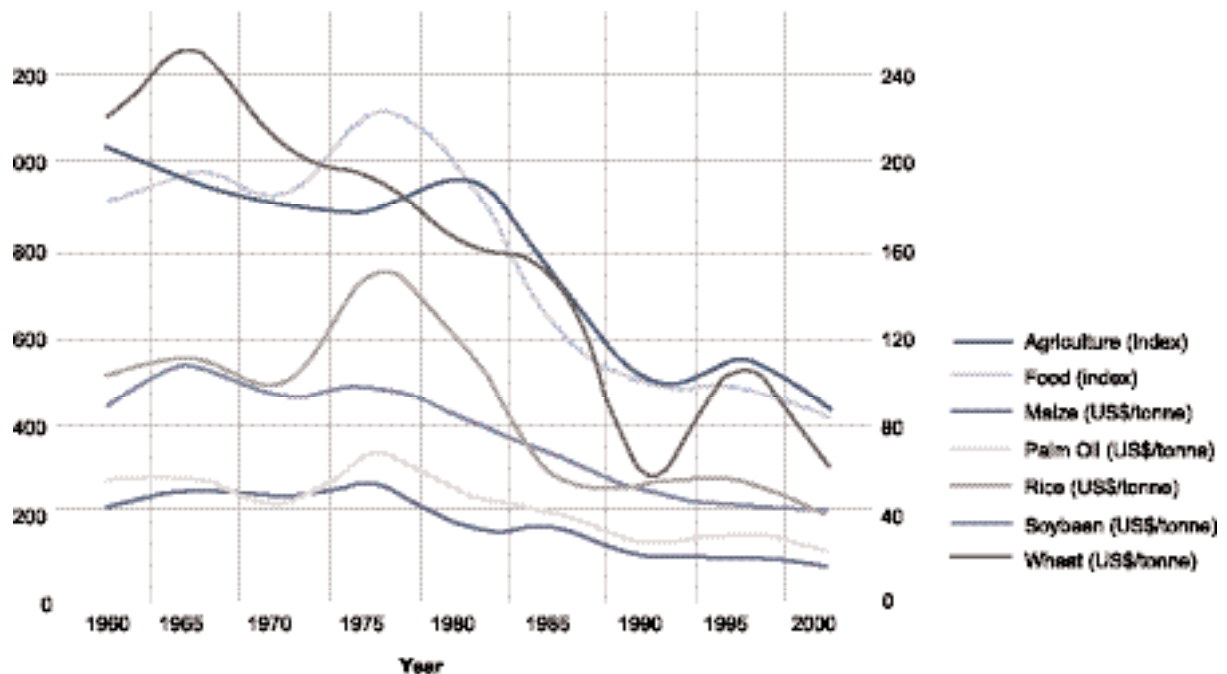
Table 4(d): Growth in agricultural production (% per annum)

	1969 to 1999	1979 to 1999	1989 to 1999	1997-1999 to 2015	2015 to 2030
World	2.2	2.1	2	1.6	1.3
Developing countries	3.5	3.7	3.9	2	1.7
Industrial countries	1.3	1	1.4	0.8	0.6
Transition countries	-0.4	-1.7	-4.7	0.6	0.6

Source: *World Agriculture: towards 2015/2030, Summary Report, FAO (2002)*

The growth in agricultural production up to year 2030 is shown in Table 4(d). The data contained in this table shows that over the years, the growth in agricultural production will be declining in the world. It is projected that for transition economies, the growth in agricultural production will increase in the period 1997-99 to 2015 as compared to previous years but that it will remain constant over the next fifteen years up to 2030.

Figure 4.1: World market prices for agricultural commodities, 1960 to 2000



Source: *World Agriculture: towards 2015/2030, Summary Report, FAO (2002)*

The price of all commodities including agricultural goods is determined by the market forces of demand and supply. Figure 4.1 shows that from 1960 to 2000, the prices of all the agricultural commodities including the world's major food staples like rice, wheat and maize have been falling. In fact, it can be seen that the agriculture index is represented by a downward sloping line. This decline in prices indicates that, globally, supplies of agricultural commodities has not only kept pace with demand, but has even outstripped it.

The Mauritian Agricultural Sector

Since independence, the Agricultural sector which was dominated by sugar has been the backbone of the Mauritian economy. However, the trend has changed with the development of the Export Processing Zone in the 1980's whereby the manufacturing industries have surpassed the Sugar sector (Vision 2020).

The two major subsectors of Agricultural sector are the sugar and non-sugar industries. The sugar sector includes cane plantation and sugar manufacture while the non sugar sector includes tea, tobacco, flower growing, fishing (accounted for in a separate chapter-Seafood Hub), agricultural & animal farming, forestry, and logging & related service activities.

Given that Mauritius owes its economic success to the Agricultural sector, the aim of the Government should be to nurture the Mauritian agriculture by re-orienting it in such a way so as to meet the future needs of the economy. In fact, this goes in line with the government's objective to enhance the value of agriculture in the island. There is thus a firm determination by policy makers to revisit and rethink the Agricultural sector so as to create more jobs in this sector. The wish of the Government is that, in the coming years, this sector generates additional employment avenues, especially for the young entrepreneurs. With globalisation, there is increasing competition around the world. The State is conscious about this fact and is therefore planning to reduce the cost of production in agriculture so as to face the competitors on the European market. Optimal use of all resources will also be made in order to increase the value added in this sector. Aware of the constraints faced by small planters, the Government is also aiming at promoting greater access to land by offering agricultural land to Mauritians, which can be further exploited.

The sugar sector is presently facing unprecedented challenges with the decision of the European Union to reduce the price of sugar for ACP countries. To counteract this problem, several mechanisms, in line with the democratisation process of the Government, involving all stakeholders have been put in place. The Government has shown its determination to provide all necessary facilities so as to successfully diversify from a sugar industry to an efficient cane industry geared towards the production of high value added sugar as well as sugar cane by-products. In this connection, it is expected that the Sugar Cane Policy Unit will conduct required studies. More schemes such as derocking and irrigation projects have to be launched to help modernise this industry and facilitate the clustering of small planters.

From the Table 4(e), it can be seen that many indicators of the Agricultural sector are showing signs of an ailing sector and this situation calls for a re-engineering of the sector. The share of agriculture in GDP and the share of investment in agriculture in total GDFCF have been falling. Employment in the Agricultural sector has also been decreasing continuously and the annual growth rate of agriculture has been unstable and very low. Sugar which represented the major chunk of the Agricultural sector has also registered a very low growth rate.

Table 4(e): Main aggregates of the Agricultural Sector 1995 - 2005

	Unit	1995	1996	1997	1998	1999	2001
Gross Domestic Product (GDP), at market price	Rs M	69,082	77,310	88,338	100,213	107,749	132,092
Value added-agriculture, at basic price	Rs M	5860	6592	7217	7888	5612	7,277
<i>of which sugar cane</i>	Rs M	3573	4217	4179	4842	2432	4646
<i>government services</i>	Rs M			609	601	710	872
Share of agriculture in GDP at basic prices	%	9.7	9.8	9.3	8.9	6	7.2
Share of sugar cane in agriculture	%	61	64	57.9	61.4	43.3	54.9
Employment in agriculture	000	60.7	54.4	54.5	53.0	50.9	49.5
Share of agriculture in total employment	%	13.4	13	12.5	11.9	11.5	11
Gross Domestic Fixed Capital Formation (GDFCF)	Rs M	16,750	20,125	23,481	23,082	29,676	29,798
GDFCF in agriculture	Rs M	660	630	678	790	864	648
Share of investment in agriculture in total GDFCF	%	3	3.1	2.9	3.4	2.9	2.2
Annual growth rate of agriculture	%	8.4	4.1	3.5	-1.5	-25.8	7.2
Annual growth rate of sugarcane	%	10	11.1	5.1	2.5	-43.9	9.9
Share of agricultural products in total domestic exports	%	30.4	32.4	29.2	28.1	24.7	25.7

	Unit	2002	2003	2004	2005
Gross Domestic Product (GDP), at market price	Rs M	142,802	156,903	175,722	186,408
Value added-agriculture, at basic price	Rs M	8,469	8,588	9,664	9,448
<i>of which sugar cane</i>	Rs M	4,102	4,370	5,094	4,870
<i>government services</i>	Rs M	913	954	1,031	1,071
Share of agriculture in GDP at basic prices	%	6.3	6.3	6.3	5.7
Share of sugar cane in agriculture	%	49.5	51.7	52.7	51.5
Employment in agriculture	000	42.2	49.5	49	49
Share of agriculture in total employment	%	9.6	9.9	9.7	9.7
Gross Domestic Fixed Capital Formation (GDFCF)	Rs M	31,074	35,554	38,003	39,574
GDFCF in agriculture	Rs M	832	954	1,130	1,974
Share of investment in agriculture in total GDFCF	%	2.7	2.7	3.5	5.0
Annual growth rate of agriculture	%	-16.3	1.9	6.0	-5.3
Annual growth rate of sugarcane	%	-25	3.7	6.5	-9.2
Share of agricultural products in total domestic exports	%	27.9	28.7	30.6	36.7

Source: Digest of Agricultural Statistics, CSO (1995 - 2005)

Table 4(f): Share of agriculture in the economy from 1995-2005 (Percentage)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Share of agriculture in GDP	9	9.6	9	9	6	7	7	6	6	6	6
<i>Government Services</i>	-	-	-	-	-	10	11	11	11	11	11
<i>Foodcrops & others</i>	-	-	-	20	29	22	21	20	19	19	19
<i>Livestock & poultry</i>	-	-	-	10	13	12	10	11	12	12	14
<i>Fishing</i>	5	-	4	4	4	4	3	4	4	4	4
<i>Sugar cane, tea & tobacco</i>	-	-	-	66	54	52	55	54	54	54	52
<i>Other Crops & Services</i>	22	-	21	-	-	-	-	-	-	-	-
<i>Livestock</i>	11	-	11	-	-	-	-	-	-	-	-
<i>Agro-industrial crops</i>	62	-	64	-	-	-	-	-	-	-	-

Source: *Digest of Agricultural Statistics, CSO (1995- 2005)*

From Table 4(f), it is clear that sugar cane, tea and tobacco account for over 50 percent of the share of agriculture in GDP, followed by food crops.

In fact, the horticultural industry, comprising mainly of anthurium, has gained importance in recent years. The main export markets for flowers are Japan, Italy and the United States of America. As regards meat, it is mostly imported even if the island is self-sufficient in poultry and pork, and there is some cattle production on local estates.

Besides, given that the cost of transporting fresh products to export markets has been rising, there is a shift towards the production and exports of processed fruit and vegetables including pickles, curry powder, fruit paste and jam, and banana chips. These agro-based products are mainly being exported to France, the United Kingdom and Germany.

Employment in the Agricultural Sector

The employment scenario in the Agricultural sector as shown in Table 4(g) illustrates that there is a concentration of male employees with the overwhelming majority being employed in the sugar cane industry and 'other agricultural activities'. The sub sector employing the least number of employees is the tea industry.

Table 4(g): Total employment by gender in the Agricultural sector (large and small establishments)

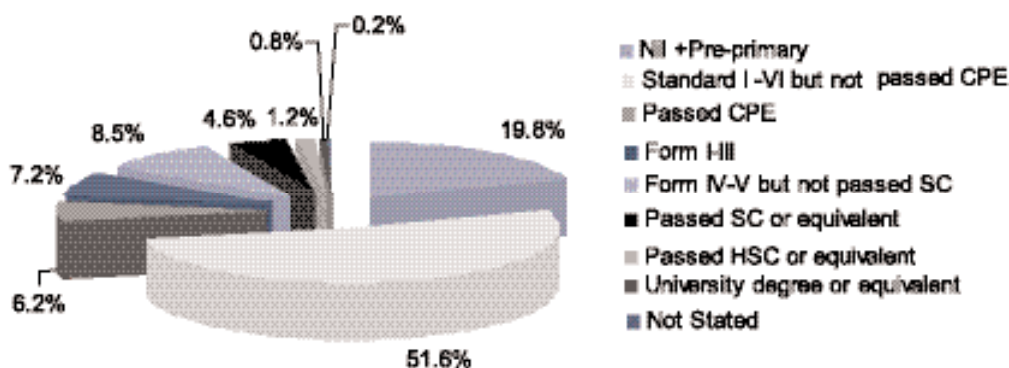
Year	Sugar Cane		Tea		Other agricultural activities		Total employment		
	Male	Female	Male	Female	Male	Female	Male	Female	Total
1994	26,280	11,525	3,315	2,845	9,520	8,350	39,115	22,720	61,835
1995	25,300	11,200	3,010	2,600	9,920	8,750	38,230	22,550	60,780
1996	24,900	9,700	950	450	12,250	6,200	38,100	16,350	54,450
1997	24,550	9,350	650	300	13,675	6,000	38,875	15,650	54,525
1998	23,540	9,150	580	270	13,680	5,870	37,800	15,290	53,090
1999	22,260	8,650	565	255	13,450	5,760	36,275	14,665	50,940
2000	21,654	7,752	543	247	13,687	5,787	35,884	13,786	49,670
2001	20,783	7,284	500	551	15,039	5,349	36,322	13,184	49,506
2002	17,027	4,581	479	533	14,590	5,006	32,096	10,120	42,216
2003	16,210	3,660	483	549	15,310	5,470	32,003	9,679	41,682
2004	15,700	3,400	400	800	15,500	7,200	31,600	11,400	43,000
2005	15,300	3,300	400	800	14,700	8,420	30,400	12,520	42,920

Source: *Digest of Agricultural Statistics, CSO (1994 - 2005)*

Educational Profile of Employees in the Agricultural Sector

Following the 2000 Population Census conducted by the Central Statistical Office, the educational attainment of employees in the Agricultural sector (excluding fishing) is shown in Figure 4.2.

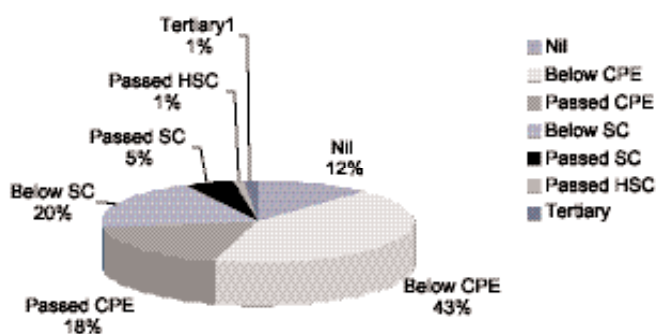
Figure 4.2: Educational Profile-2000



Source: Population Census, CSO (2000)

Figure 4.2 shows that more than 50 percent of the total agricultural working population have studied up to Standard VI but have not passed CPE while 19.8 percent have no educational background and/or pre-primary schooling. It can be seen that as the educational attainment rises, the percentage of employees in the respective categories keeps on declining.

Figure 4.3: Educational Profile in the Agricultural Sector - 2005



1 : Degree and Diploma holders only

Source: Continuous Household Multipurpose Survey, CSO (2005)

From Figure 4.3, it can be seen that in 2005, 43 percent of those employed in the Agricultural sector have an educational background which is below CPE while 20 percent do not possess an SC (in full) and 18 percent have succeeded at the primary education level. The least number of employees are those who have passed HSC (1%) and those having a tertiary qualification (1%). As compared to year 2000, the percentage of diploma and degree holders has nearly doubled in 2005. This may indicate a shift towards professionalisation of the work in the sugar estates.

The Sugar Sector

Since 1953 sugar has benefitted from preferential trade agreements with the United Kingdom and later with countries of the European Economic Community (which became the European Union in 1992). A sugar agreement known as the Sugar Protocol was signed with the EEC in 1975. This sector has remained the highest gross earner and employer until the late 1980's when it was overtaken by the manufacturing industries. Even though there was an increase in sugar cane production by 6.6 percent in 2004, this sector is in a crisis state.

In fact, most of the sugar cane and the tea factories have been setup in Mauritius in the 1800's. According to the Mauritius Sugar Producers Association, in the year 1900, there were 80 sugar factories, 24 in 1960, 17 in 1990 and 7 to date. Thus, there were many sugar factories in the past but with the eventual decrease in the price of sugar, only a few will continue operation. In order to survive, many existing small factories are merging into one big factory which then not only produces sugar but also processes its own by-products such as thermal energy. Some sugar factories have also invested in tourism where there is much more profit. It has to be noted that the tea industry is also facing similar situation as the sugar sector, with fewer tea factories in operation (CSO, 2004).

In 1997, the Government (Vision 2020) had already foreseen that *“the sugar sector is most likely expected to follow a declining trend in the area under cultivation. More emphasis is being put on increasing the productivity of both the field and the factory operations and decreasing its cost.”*

In this context, the Minister of Finance announced in the Budget Speech 2006/07 that small planters will benefit from incentives and assistance to enable them to regroup into larger units so as to increase their yields and lower their costs of production. To this end, the Mauritius Sugar Authority has earmarked an amount of Rs 500 million for de-rocking, irrigation, improved cultural practices and better cane varieties. From this amount, Rs 276 million have been committed to acquisition of equipment for the Sugar Planters Mechanical Pool.

Sugar Sector Strategic Plan

A Sugar Sector Strategic Plan has been implemented during 2001-2005 by providing for factory closures and the implementation of a Voluntary Retirement Scheme in the industry to bring down the high labour costs to more competitive levels.

Voluntary Retirement Scheme

The first phase of Voluntary Retirement Scheme (VRS) was introduced in 2001 to cut down labour costs and as at January 2007, 8207 employees of the sugar industry have opted for voluntary retirement. The benefits guaranteed to such employees are 300 m² of land and a cash compensation of 2 months' salary per year of service for male agricultural workers who are 55 years and above, and female agricultural workers who are 50 years and above. For other workers retiring under the VRS scheme, the compensation is as follows:

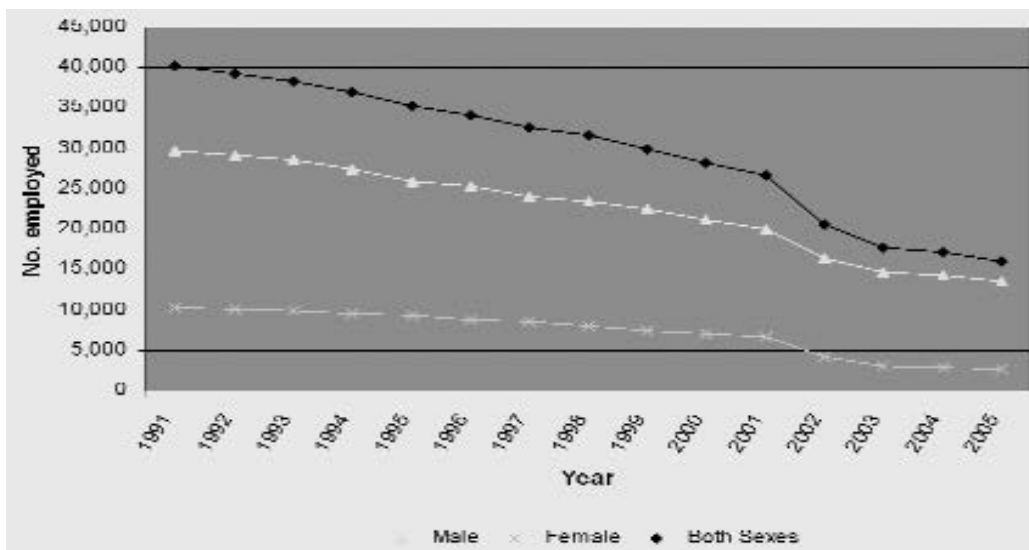
<i>Length of service</i>	<i>Number of Month of salary per year</i>
1 st 5 years	1.50
Next 10 years	1.25
Next 10 Years	1.00
Remainder of Service	0.75

The companies, whose employees retire under the scheme, have on the other hand been provided incentives, namely exemption from payment of land conversion tax. Such companies have so far applied to convert an estimated 2258 acres of land on sites of their choice.

Employment in the Sugar Industry

According to the Remuneration Order, the worker in the Agricultural sector must work for 40 hours per week during intercrop season and 45 hours per week during harvest time. The working time in the Agricultural sector has been the same for the past centuries. In the Sugar sector, there are different categories of workers such as field, factory, garage and administration workers. The working hours for each category are somewhat different from each other. The field workers that include the *Sirdars* and cane cutters start working early hours and can go home whenever they finish their work. This category of workers gets task work, where the employees are required to perform certain amount of work in the sugar cane fields and shall be remunerated for the extra work done, and once they complete their quota of work they are free to go home. The cane cutters have to start work early, so the earlier the better for them and can leave as soon as they finish. As for the factory workers including the garage workers, the workers in the factory or those in the administration, depending on the harvest season, their working hours vary. During the harvest season, the working hours are usually from 06 00 hrs to 18 00 hrs, otherwise, it is from 07 hrs 00 to 16 hrs 00. The implementation of flexitime in these organisations already existed for the field workers since centuries ago. But this flexitime is difficult to be extended to the other workers like the factory workers since the employer feels that the cost of production will increase. As for the garage workers, they work according to a roster system.

Figure 4.4: Employment by gender in the Sugar Industry, March 1991-2005



Source: *Digest of Labour Statistics, CSO (1991-2005)*

Sugar has been a large employer over the years but with time, employment is falling continuously in this sector. From Figure 4.4, it can be seen that total employment that is dominated by male workers.

Table 4(h): Employment by gender in the Sugar industry, March 1991 - 2005

Year	Cane plantation*			Sugar manufacture**			Total		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
1991	22,500	10,238	32,738	7,300	100	7,400	29,800	10,338	40,138
1992	21,925	10,047	31,972	7,200	100	7,300	29,125	10,147	39,272
1993	21,517	9,743	31,260	7,000	100	7,100	28,517	9,843	38,360
1994	20,773	9,456	30,229	6,659	108	6,767	27,432	9,564	36,996
1995	19,905	9,204	29,109	6,031	83	6,114	25,936	9,287	35,223
1996	20,323	8,743	29,066	4,984	55	5,039	25,307	8,798	34,105
1997	19,696	8,477	28,173	4,289	57	4,346	23,985	8,534	32,519
1998	19,485	8,031	27,516	4,038	52	4,090	23,523	8,083	31,606
1999	18,727	7,334	26,061	3,861	25	3,886	22,588	7,359	29,947
2000	17,797	6,989	24,786	3,331	27	3,358	21,128	7,016	28,144
2001	16,916	6,618	23,534	3,143	27	3,170	20,059	6,645	26,704
2002	13,453	4,162	17,615	3,035	29	3,064	16,488	4,191	20,679
2003	12,499	3,041	15,540	2,208	22	2,230	14,707	3,063	17,770
2004	12,035	2,787	14,822	2,260	22	2,282	14,295	2,809	17,104
2005	11,246	2,557	13,803	2,213	21	2,234	13,459	2,578	16,037

Source: * *Digest of Agricultural Statistics, CSO (1991-2005)*

** *Digest of labour statistics, CSO (1991-2005)*

Table 4(h) shows that total employment in the sugar industry has registered a continuous decline from 1991 to 2005 (decrease of 60 percent). In fact, sugar factory closures and the mechanisation of harvesting has reduced employment in both the agricultural and manufacturing components of the sugar industry. Besides, the data clearly illustrates that there are relatively fewer female employees in both cane plantation and sugar manufacture. As a whole, there are more employees in the cane plantation than in sugar manufacture.

Sugarcane plantations occupy about 90 percent of total land under cultivation. There are three categories of growers in the sugar industry, namely “*miller*”, “*metayer*” and “*owner planters*.” *Millers* are owners of sugar factories and large plots of land around these factories. *Metayers* are employees of the *millers* who are allowed to grow sugarcane on their lands. Value added generated by the sugar industry is attributed, for national accounting purposes, to the following industrial activity groups:

Agriculture: the final product is sugarcane. Both *millers* and *planters* are engaged in its production.

Manufacturing: the final product is sugar and its by-products are molasses, scums and electricity which exclude Independent Power Producers (IPPs). Only *millers* are engaged in this activity.

Transport: includes only the *millers*’ own account transport of sugarcane, sugar and other inputs.

Distribution: includes activities of brokers, shippers and the Mauritius Sugar Syndicate.

Table 4(i) shows that the majority of area harvested as well as cane production belong to estates and owner planters. It also indicates that from 1994 to 2005, the total area harvested has decreased.

Table 4(i): Area harvested and cane production from 1994 to 2005

Year	Area Harvested (hectares)			Total	Cane Production (CCC tonnes)			Total	Tonnes/hectare
	Estates	Metayer	Owner Planters		Estates	Metayer	Owner Planters		
1994	38,356	1,452	33,209	73,017	2,866	54	1,893	4,813	65.9
1995	36,362	1,231	34,416	72,009	2,900	53	2,206	5,159	71.6
1996	36,375	1,479	33,946	71,800	2,988	70	2,202	5,260	73.3
1997	38,783	1,470	32,505	72,758	3,354	74	2,359	5,787	79.5
1998	37,330	1,096	35,587	74,013	3,221	61	2,499	5,781	78.1
1999	33,227	1,089	38,161	72,477	2,203	43	1,636	3,882	53.6
2000	35,885	1,092	36,080	73,057	2,878	55	2,176	5,109	69.9
2001	35,495	1,101	36,601	73,197	3,139	64	2,589	5,792	79.1
2002	29,619	1,073	41,575	72,267	2,293	50	2,531	4,874	67.4
2003	28,284	1,041	41,670	70,995	2,309	52	2,839	5,200	73.2
2004	28,022	1,013	40,664	69,698	2,350	49	2,882	5,280	75.8
2005	27,699	1,039	39,612	68,351	2,270	50	2,664	4,984	72.9

Source: *Digest of Agricultural Statistics, CSO (1994-2005)*

Educational Profile of Employees in the Sugar Sector

Given the unavailability of data on the educational profile of employees in the sugar sector, the HRDC has surveyed three sugar estates namely Société Usinière du Sud (Mont Loisir), Deep River Beau Champ Milling Co Ltd and Medine Growing Co Ltd to obtain the educational background of their employees. It was found that out of a total of 1690 employees:

- the highest number of employees (35.1 percent) had studied up to Certificate of Primary Education, 24.9 percent of employees had failed their CPE , 17.2 percent had passed CPE and 12 percent of employees had studied up to Standard III only;
- the group of employees had secondary education comprised 12 percent of those who had reached up to Form III, 4.4 percent who had studied up to Form IV, 3.6 percent who had reached Form V level, 0.2 percent who had Upper VI and 0.1 percent who had Lower VI.
- only a few employees had post secondary education, 4 percent possessed a certificate, 0.7 and 0.4 percent were diploma and degree holders respectively and only 0.1 percent had post graduate degrees.

Besides, from the survey it was noticed that the average minimum and maximum age of the employees were as follows:

Table 4(j): Age profile of employees in the Sugar Industry

Educational Background	Average Minimum Age	Average Maximum Age
No education	36	57
Up to Standard III	35.5	57
Up to CPE	36	57
CPE Pass	36	57
CPE Fail	36	55.5
Up to Form III	35	57
Up to Form IV	35	57
Up to Form V	29	56
Up to Lower VI	36	54
Up to Upper VI	36	52
Certificate	26	50.5
Diploma	NA	46
Degree	28	51
Post Graduate Degree	NA	50

Source: HRDC Manpower Planning Survey, 2006-2010.

Table 4(j) shows that the average minimum and maximum age of employees in the sugar sector ranges from 28 years to 57 years. This implies that in case of additional closures of sugar factories, the employees who are relatively young should be empowered with the necessary skills in order to ensure that they remain employable.

A Roadmap for the Mauritius Sugarcane Industry for the 21st Century

Honourable Dr Arvin Boolell, Minister of Agro-Industry and Fisheries presented the *Roadmap for the Mauritius Sugarcane Industry for the 21st century* in September 2005. The document highlighted the importance of the sugarcane industry for our economy and the various measures that are being taken to help this sector face the challenges in a globalised environment. According to the roadmap, the sugar sector has to be converted from the sugar industry into an efficient cane industry geared towards the production of high value added sugar, by-products and energy.

In the roadmap, it is mentioned that after implementation of the Mauritius Action Plan 2005-2015, the

Table 4(k): Expected Evolution of the sugar industry from 2005 to 2015

Feature	2005	2015
Sugar Production (t)	575,000	550,000
Export Mix	Basically bulk raws	Fair share of bulk raws and direct consumption sugars
Sugar Factories	11	6
Acreage (ha)	72,000	65,000 (including 5000 ha in difficult areas)
Bagasse (GWh)	325	600
Coal (GWh)	425	1100
Ethanol (M litres) (From local molasses)	-	30
Cost of production	Medium	Low medium

Source: A Roadmap for the Mauritius Sugarcane Industry for the 21st Century, Ministry of Agro-Industry and Fisheries, September 2005

sugar industry is expected to undergo the above changes:
The following core measures are contained in the roadmap:

Production and Export Mix

Formation of a sugar cluster which amongst others will involve a much higher level of electricity produced from bagasse, higher production of special sugars, the production of ethanol from molasses and the development of other sugar based products.

Field Operations

There is a need to maintain efforts to improve yields through mechanisation/irrigation, to reduce both production and management costs and to invest in co-products. As regards the small planters and métayers, there is a strong need to improve yield through intensive land preparation, derocking and irrigation.

Derocking

Given the reduction of land under sugar cane cultivation in the coming years, it is important to maintain sugar cane in areas which are found in rocky regions and mountain slopes. Therefore derocking is very important.

It is, therefore, proposed that an efficient coordination mechanism should be established to ensure effective coordination between the different organisations involved and that each institution implements each component of the projects within a set time frame. The Mauritius Sugar Authority will monitor and coordinate the implementation of this scheme. Stone crushers would be called upon to collaborate in the derocking programme for the disposal of the rocks.

Irrigation

The objective is to increase the acreage under irrigation by 10 000 ha by 2015. For 5000 ha, sources of water have been identified. For the remaining 5000 ha more research on sources of water is required. Government would also review procedures for the irrigation projects so as to avoid unnecessary delays and expenditure and to ensure the timely execution of the projects.

Regrouping of Small Planters

Small planters would be encouraged to regroup themselves in order to facilitate land preparation,

derocking, mechanisation and irrigation. A flexible form of regrouping for the management of land preparation would be considered through a process of continuous dialogue and consultation with the small planters. It would be ensured that the regrouping process benefits the small planters.

Production on Difficult Lands

The objective of producing on difficult lands is to prevent soil erosion in the steeply sloped difficult areas. Support would be provided to encourage continued production in these areas.

Métayers

Government would, wherever required, act as a facilitator through tax incentives and concessionary loans for the acquisition of land under métayage which will be facilitated through mutual agreement between métayers and landowners for the acquisition of land under métayage and review the terms and conditions of the métayer contract.

Factory Operations and Management

In the context of a global centralisation plan, given that the future of the sugar industry depends on an adequate and profitable supply of canes and operations of mills, it is proposed that there is a need to have a centralisation of milling activities and reduce the number of factories from 11 to 6 by 2008. Factories wishing to close down will have to comply with the provisions of the Blue Print on Centralisation.

Optimal Use of Bagasse

To optimise the use of bagasse, it is recommended that:

- (i) all sugar factories be coupled with firm power plant operating with state of the art technology;
- (ii) factories would be geared towards maximising energy savings;
- (iii) wherever possible, cane field residues would be used as fuel;
- (iv) new plants would come on stream in Savannah (82 MW in 2007) and Médine (35 MW in 2011/2012) depending on the demand of CEB;
- (v) the existing plants in FUEL and Deep River Beau Champ would be replaced in 2008-2011 with more or less similar or slightly expanded dispatch capacity. Some 65MW is involved; and
- (vi) all the power plants have to adhere to the environment norms applicable to them.

Ethanol

It is estimated that by 2015, some 30 million litres of ethanol can be obtained locally for use as blended gasoline/ethanol. The vision of the Mauritian economy is to use Mauritian molasses to produce ethanol for blending and /or export, imported molasses to produce ethanol for blending and/or export and the processing of imported hydrous ethanol into anhydrous ethanol for re-export. Studies will be carried out on the various options for the disposal of vinous. A strategy for blending of ethanol and gasoline through a staged approach to reach 25 percent in 2015 would be formulated.

In L'Express of Friday 16 September 2005, Mr Jayesh Ajwani, Chairman of the Board of Chandni Oil Co Ltd., Mauritius expressed his views. First of all he said, that the company will be investing Rs 600 million in the construction of a fuel ethanol plant on 15 acres of land at Riche Terre and stressed on the fact that it is important to differentiate between the three types of ethanol: *food grade* to make alcohol, *industrial* for pharmaceutical purposes and *fuel* for blending in vehicles. It was also mentioned that the plant would generate direct employment of 80 persons, 40 of whom will be Indian experts who will train the locals. The vinous will be converted into biogas to produce electricity. The plant is also expected to produce 100 000 litres of ethanol per day, the bulk of which will be sold to African countries and 20 percent will be sold on the Mauritian market. At the initial stage, ethanol will be blended with petrol in the proportion of 10 percent to 20 percent; afterwards this proportion will be increased to 24 percent ethanol and 76 percent petrol. 5 to 10 percent of ethanol can also be blended with diesel. After setting up its plant in Mauritius, Chandni Oil Co Ltd is planning to export its technology to Madagascar. It is said that this project is coming at the right time given the subsequent fall of the sugar price and the rise in the price of petroleum products.

Besides, the distillery Alcodis, in Rose Belle, that has produced 3, 5 million litres of ethanol in 2005, is planning to expand its business. In fact, in an interview given to Défi Plus of 15-21 October 2005, Mr Roland Maurel Junior, Managing Director of Alcodis mentioned that having invested USD 20 million in the distillery, in 2006, they are thinking to produce 30 million litres of ethanol. He mentioned that his distillery will buy all the molasses being produced by Mauritius Molasses Company, and Alcohol and Molasses Company (120 000 tonnes) that was being exported previously to Europe. At present, Alcodis is using basically molasses from sugar cane while it can also be obtained from cane juice. In 2006, Alcodis would be proceeding to the dehydration of ethanol by extracting maximum water from it for blending purposes as ethanol should contain almost no water at all. According to Mr Roland Maurel Junior, the utilisation of ethanol would be very beneficial to the Mauritian economy because overall costs will be lower given that ethanol can be produced locally at a competitive price without importing the raw materials.

The biggest producer of ethanol in the world is Brazil, followed by the United States. They cater for 95 percent of world demand for ethanol. Besides, around 30 billion litres of ethanol (30 million tonnes) are produced annually in the world and this production will be increased to 40 billion by 2006 (L'Express, Friday 16 September 2005). It is expected that in five years time, the production of

ethanol will rise to 130 million. It is said that the demand for ethanol will keep on rising on the international scene given that the stock of fuel is decreasing and its price is soaring. Forecasts show that the price of a barrel of fuel might reach up to USD 100 by 2007 (Défi Plus, 15-21 October 2005). In fact, the Kyoto Protocol recommends the use of ethanol as it reduces pollution. In this context, Europe has shown its interest to blend 5.75 percent ethanol with fuel by 2010. In the United States, ethanol is produced from maize. The other products from which ethanol can be derived are wheat and beetroot. As a matter of fact, there are some vehicles in Brazil that run with ethanol only.

Rhum Agricole

Rhum Agricole will be promoted as a high value product and its production will be increased.

Equity Participation

Planters and employees own some 20 percent of equity in milling companies through the Sugar Investment Trust. In order to foster a sense of ownership and participation in the reform process, a series of measures have been proposed.

Rationalising the Use of Global Cess

The cess is used to provide services to stakeholders of the industry. It is proposed to have an international consultant to review the role and functions of the various institutions and make recommendations that would be implemented by 2008.

Research and Development

Various measures have been proposed so as to review the role of the Sugar Research Institute to move from a sugar industry focus to sugarcane cluster focus. Thus, an amount of Rs 500 million has been earmarked for the period 2005-2015 for such research and development.

Debt Situation

Creative and innovative solutions have to be found for the sector to reschedule its debts and find buyers for its converted land.

Agricultural Crop Diversification

The concept of diversification within sugar includes the optimal use of co-products; the production of special sugars, as well as the optimal use of cane interlines and cane rotational land.

Non-sugar Sector

Given that the non-sugar sector will have to face several challenges in the coming years, the government has decided to implement an ambitious strategy for the sector which would, inter alia, provide for the use of high technology production techniques. Biotechnology is a key element for the forward looking agricultural diversification strategy of Mauritius.

In fact, the 2005/2006 Budget announced support for the sugar industry through implementation of various projects that are in line with the Roadmap.

Preferential Trade Agreements for Sugar

A. Commonwealth Sugar Agreement (1951)

In 1948 discussions started on a long-term agreement where the British government wished to obtain assured supplies from the sterling area, both for balance of payments reasons and in order to lift the rationing of sugar as soon as possible. The Commonwealth Sugar Agreement (CSA) was signed in London on 21 December 1951 whereby irreducible import quotas were established for Britain and there was a single Commonwealth price, the 'negotiated price'. In 1968, the concept of indefinite duration was introduced in the CSA.

B. Sugar Protocol (1975 onwards)

The ACP and the EU have benefitted mutually from a long and fruitful relationship in the sugar sector under the terms of the ACP/EU Sugar Protocol. This agreement, which was signed in 1975, guarantees access to the EU market for fixed quantities of ACP sugar at preferential prices over an indefinite period of time. The Sugar Protocol is thus an agreement between governments whereby the EU Member States guarantee to buy and import agreed quantities of sugar which the ACP Signatory States undertake to sell.

Under this Protocol Mauritius has an annual target of 600 000 tonnes of sugar. Also, Mauritius has a quota of 491 030 metric tonnes (of white sugar equivalent) in any 12 month period. This works out to 507 000 tonnes of sugar. Production has remained steady between 600 000 and 700 000 tonnes since the mid-1960s. The exception occurs when severe cyclones or droughts cause a decline in the cane harvest.

C. ACP-EU Partnership Agreement (2000-2020)

The ACP-EU Partnership Agreement (widely referred to as the Cotonou Agreement) was signed for 20 years (2000 -2020), and the first financial envelope under the Agreement ends in 2007. On 31 December 2007, all commodity protocols attached to the Cotonou Agreement, except the Sugar Protocol will undergo changes.

D. Negotiations and Sugar Reforms

The first negotiations on agriculture began in early 2000, under Article 20 of the WTO Agreement on Agriculture.

In 2001, the EU took the unilateral decision, under the Everything But Arms (EBA) initiative, to suspend all customs duties and levies for all imports from 46 Least Developed Countries (LDCs). In the case of sugar, rice and bananas, duty free access was deferred until 2009. The LDCs have been allocated a quota of raw cane sugar for refining, increasing by 15 percent each year until 2009.

In November 2001, Ministers adopted the Doha Declaration, which in regard to agriculture, agreed to establish fair and market oriented trading system through a programme of fundamental reform. Such reforms purport to the phasing out of all export subsidies and substantive reductions in domestic support will have adverse consequences for Mauritius.

The WTO Framework Agreement of 1st August 2004 called for an end to all forms of export subsidies in all sectors including sugar and reductions in import tariffs, both of which will result in a substantial reform of the EU Sugar Regime. Any reform of the EU Sugar Regime impacts on ACP Sugar supplying states under the Sugar Protocol, as Mauritian prices have always been aligned with EU prices.

EU Proposals

The European Commission (EC) fearing that as from 2008, LDC sugar may swamp the EU market, has proposed radical reforms (reduction of prices as from 2006 culminating in a 39 percent cut in 2009-2010) in its draft Council Regulations of 22 June 2005. The initial proposition was that the fall will be a gradual one such that for the period 2006-2007 it is expected to fall by 5 percent, in 2007-2008 to fall by 24.6 percent, 28.8 percent for 2008-2009 and a final fall of 39 percent for the period 2009-2010 (Business Magazine, 29 June to 5 July 2005). However, after negotiations held on 24th November 2005, it was decided that the final fall in price would be 36 percent by 2009-2010. With this new rate in 2009-2010, one tonne of sugar will be sold at Rs 12 100 as compared to Rs 19 000 tonne presently. The proposed decrease in the price of sugar would be applicable as follows: 5 percent for 2006-2007, 5 percent for 2007-2008, 15.6 percent for 2008-2009 (L'Express, 25 November 2005). The details of the two rounds of negotiations are shown in Table 4 (1).

**Table 4(I): Percentage fall in the price of sugar following EU proposals
(June and November 2005)**

	2006-07	2007-08	2008-09	2009-10
Initial proposition (June 2005)	5 %	24,6 %	28,8 %	39 %
Negotiation held in November 2005	5 %	5 %	15,6 %	36 %

Source: L'Express, November 2005

However, the EU Commission has worked on an Action Plan on accompanying measures for Sugar Protocol countries affected by the reform of the EU Sugar Regime. It has proposed a quantum of Euro 40 million for all 18 Sugar Protocol countries for 2006, and as yet no quantum for the remaining period (2007-2013). This will be known after its Financial Perspectives 2007-2013 enter into force on 1st January 2007, and the amount provided under “Development Cooperation and Economic Cooperation Instrument.” It is expected that the 40 million Euros will not suffice. However, for the sugar beet growers, it was decided that the compensation would be 8 billion Euros.

Following the reduction of the price of sugar, in April 2006, Cabinet has agreed to the Multi-Annual Adaptation Strategy-Action Plan 2006-2015. The Action Plan has been worked out in consultation with all stakeholders in the sugar sector and will enable the establishment of the Mauritian Sugar Cane Cluster with the operation of very efficient and sizeable sugar factories, the production of renewable environment friendly energy, including ethanol, the production of different types of sugar to optimize the use of bagasse and molasses and strengthening the commonality of interest of millers, planters and other stakeholders.

After the implementation of the Action Plan, it is expected that

- (i) sugar production will be around 520,000 tonnes with 20% coming from small planters;
- (ii) the regrouping of small planters will lead to increased yield by 20% and reduction of operational cost by 20%; and
- (iii) sugar will become an invaluable asset in terms of production of energy with the potential for production of high value added molecules including proteins, pharmaceuticals and vaccines.

The Plan has been positively embraced by the corporate sector, the small and medium planters, as well as the sugar industry workers and their trade unions. The social aspects of all the proposals have been considered in the Plan.

HRDC Manpower Planning Survey 2006-2010 for the Agricultural Sector

After sending the HRDC Manpower Planning Survey questionnaires to employers of the Agricultural sector and conducting direct interviews with them, responses were obtained from 19 subsectors as shown in Table 4(m).

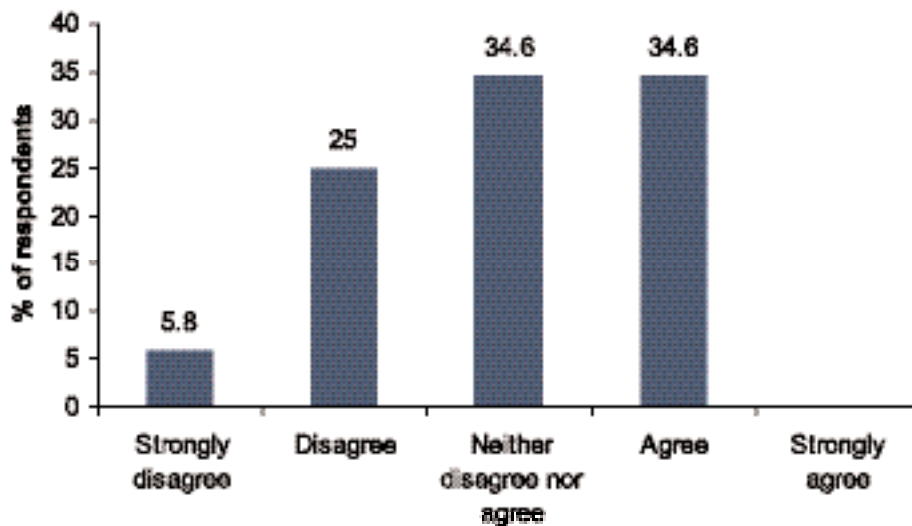
Table 4(m): List of subsectors covered in survey

S/N	Subsector
1	Sugar cane
2	Manufacture of sugar
3	Tea
4	Tobacco
5	Potatoes
6	Other vegetables
7	Anthurium
8	Other flowers
9	Other horticultural specialities and nurse products
10	Pineapple
11	Cattle
12	Poultry
13	Deer
14	Irrigation
15	Cold Storage
16	Research and experimental development on natural sciences and engineering (NSE)
17	Business and management consultancy
18	Other service activities

It has to be noted that the maximum number of respondents were from the sugar industry.

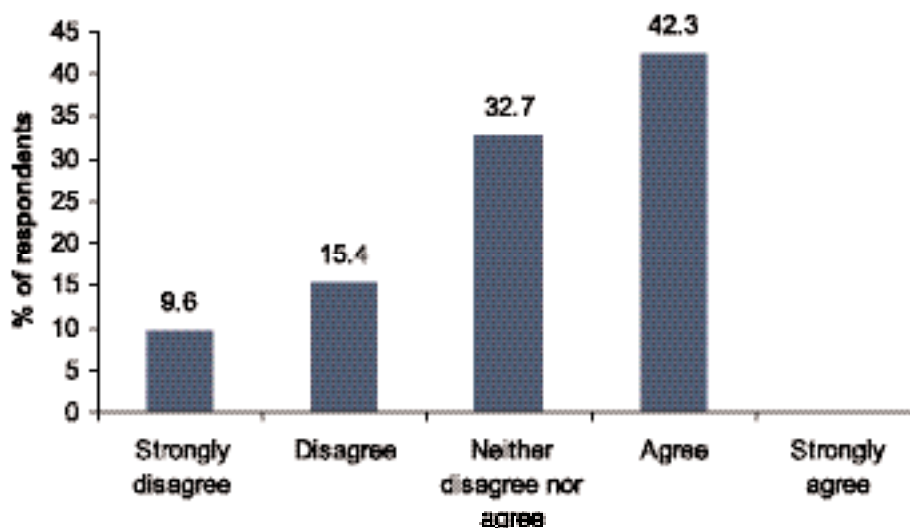
QUESTION 1- How far do you agree with the following statements in relation to the developments occurring during the next five years?

a. Mauritius will achieve an economic growth rate of 6-9 percent



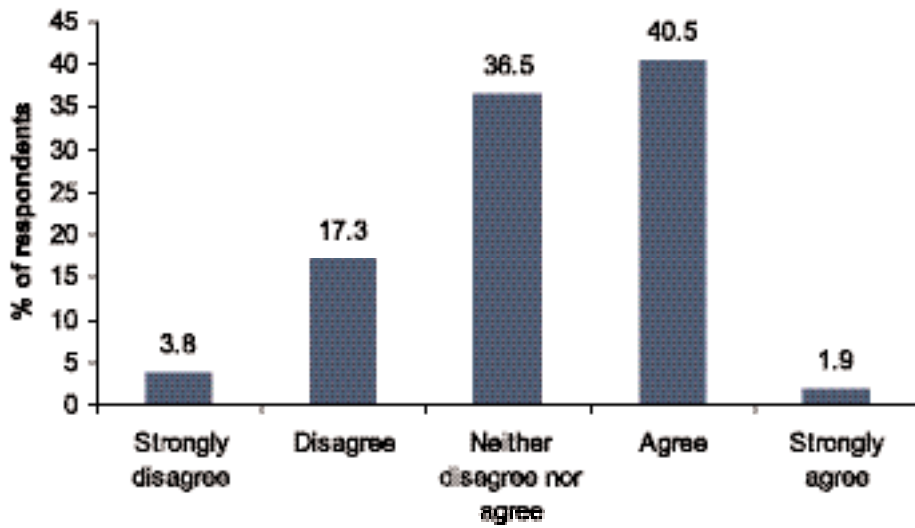
As a whole, no respondent strongly agreed with this statement. 30.8 percent of employers did not agree with this argument while 34.6 percent did not want to take a stand on it. The remaining 34.6 percent believed that Mauritius would be able to achieve this rate of economic growth. In the potato industry however, all respondents disagreed with this fact.

b. The Mauritian economy will be able to curb its rate of unemployment



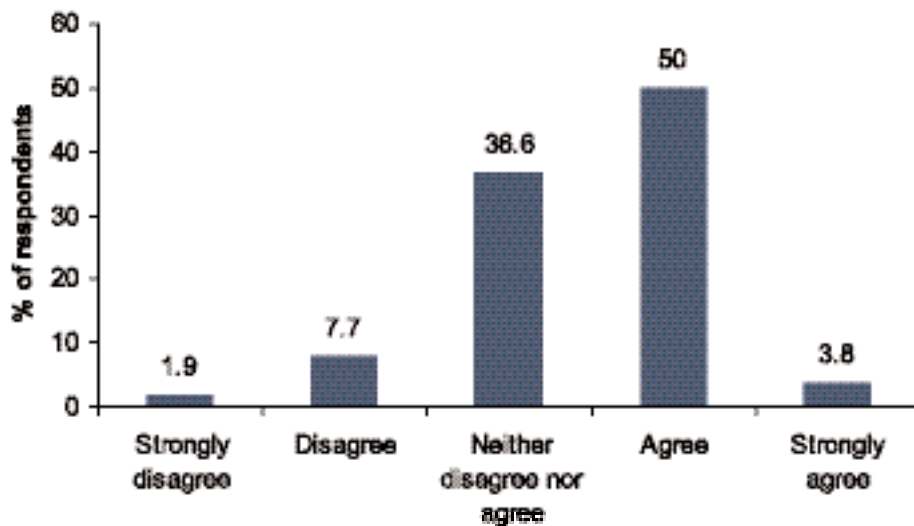
The majority of respondents (42.3 percent) said that the rate of unemployment would be reduced while one quarter was of the opposite view. It was also noted that 32.7 percent were neutral. All employers involved in the cultivation of tobacco and pineapple strongly believed that this situation would not occur.

c. Our education system will meet the requirements of our labour market



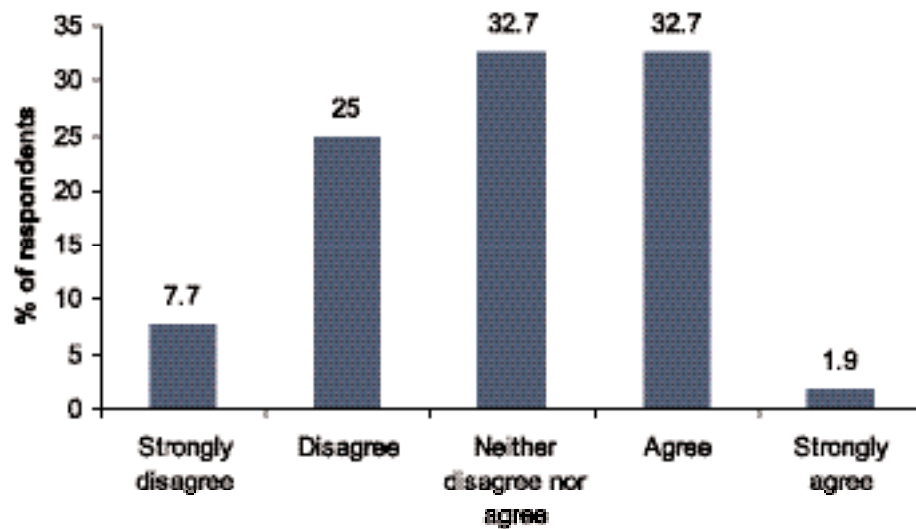
42.4 percent of respondents were agreeable to the fact that the requirements of the labour market would be met by our education system while 21.1 percent were pessimistic. Those who did not take a decision represented 36.5 percent of total employers surveyed. In the pineapple industry, employers were totally disagreeable while in the ‘business and management consultancy’ subsector, employers firmly believed in this statement.

d. Our training system will be driven by the labour market



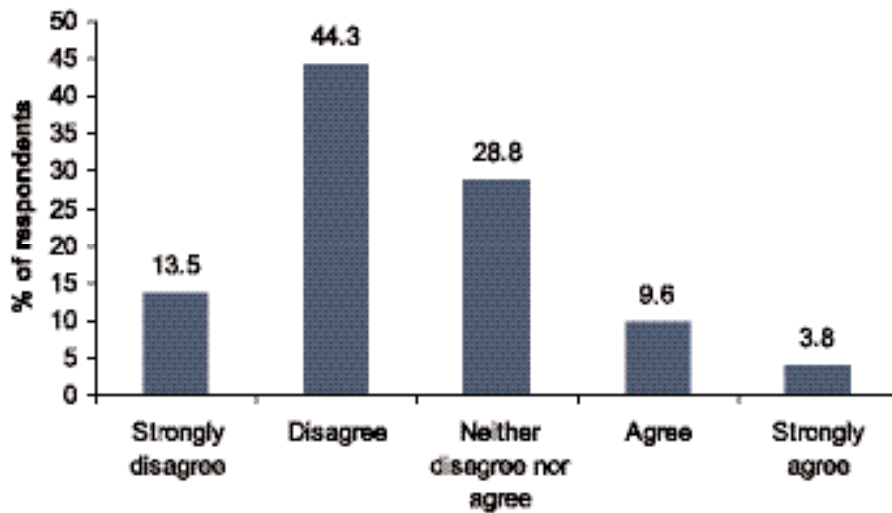
More than 50 percent of total respondents thought that the labour market would be able to drive the training system while 36.6 percent were not sure what would happen. 9.6 percent of the employers surveyed did not trust that the training system would be driven by the labour market. It was found that only in the ‘cold storage’ sub sector, respondents strongly agreed with this fact.

e. Your sector's contribution to the national economic growth will rise



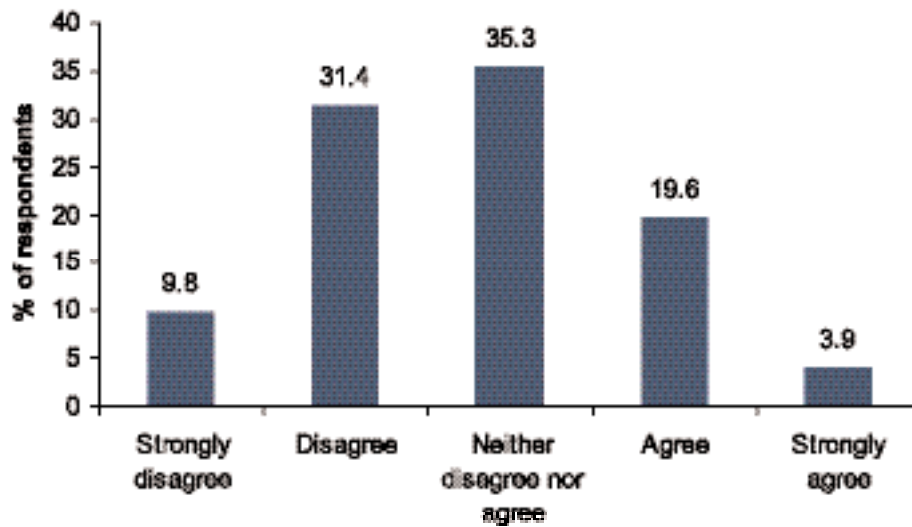
32.7 percent of total employers surveyed thought that their sector's contribution to the national economic growth would rise and the same percentage of respondents did not agree with this statement. Those who were neutral represented 32.7 percent of employers. All those involved in "other vegetables" were agreeable with this occurrence.

f. The number of employment generated by your sector will increase



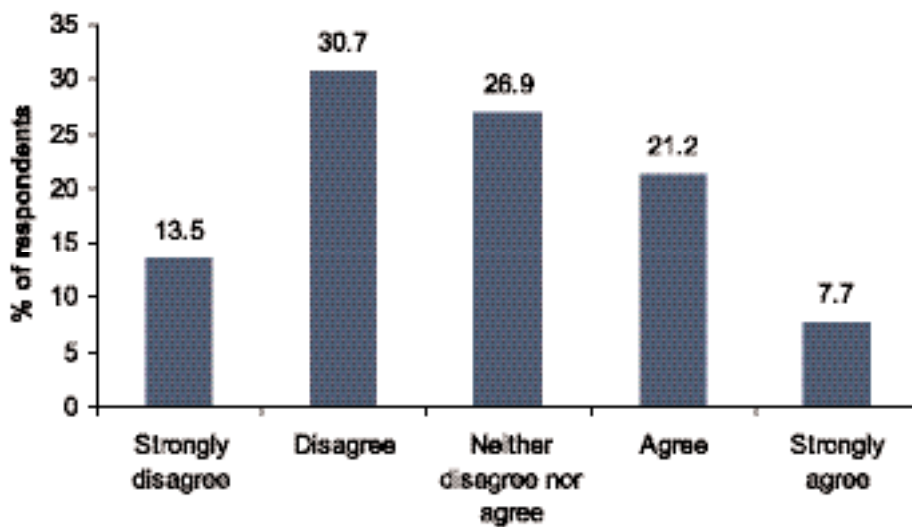
The majority of respondents (57.8 percent) thought that the number of employment generated by their sector would not increase while 28.8 percent did not express their views. Only employers involved in 'cattle' rearing and 'business and management consultancy' viewed the future of their sectors as being bright and capable of generating more jobs.

g. Your organisation will continue to expand



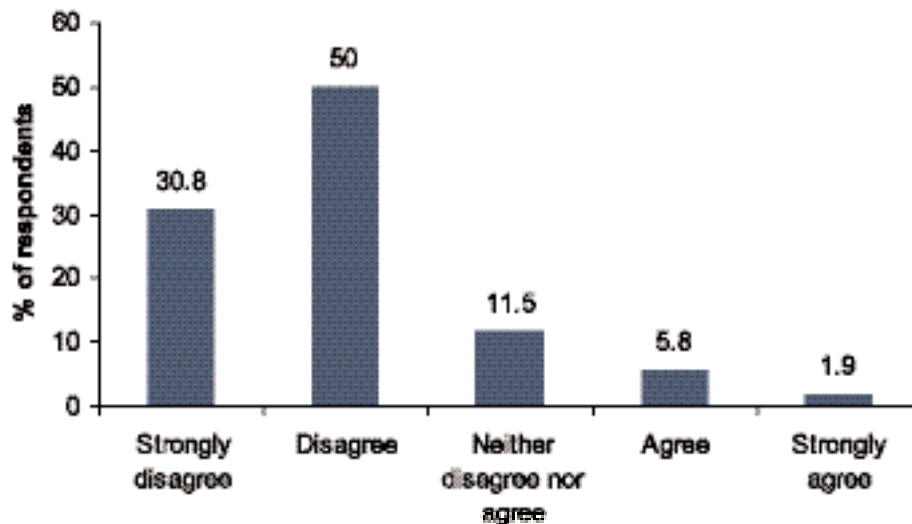
The largest number of respondents (41.2 percent) believed that their organisations would not continue to expand while 35.3 percent were neutral. Those who were optimistic about this fact represented 23.5 percent of respondents. All employers involved in 'cattle' rearing and 'business and management consultancy' strongly agreed with this fact.

h. Your organisation will be recruiting more skilled/educated employees



44.2 percent of employers were of the view that their organisations would not be recruiting more skilled/educated employees while 28.9 percent were optimistic. 26.9 percent of the respondents did not want to take a stand on this statement. In the tobacco industry employers strongly disagreed with this fact.

i. You should rely on expatriates to sustain the growth of your organisation



The overwhelming majority of respondents (80.8 percent) stated that they should not rely on expatriates to sustain the growth of their organisations while 7.7 percent were of the opposite view and 11.5 percent were neutral.

QUESTION 2- State the number of local employees you have/planning to have in your organisation.

A correlation analysis with 1994 to 2004 CSO data indicates a strong negative correlation ($R^2 = 95.0\%$) between the number of employees and the time frame.

Based on the above model and data captured from the survey, the estimated number of employees in the Agricultural sector classified by occupational group and highest educational background is shown in Table 4(n) and Table 4(o).

Table 4(n): Estimated number of employees in the Agricultural Sector

Occupational Groups	Year			
	06-07	07-08	08-09	09-10
Senior Officials and Managers	538	507	475	444
Professionals	1077	1014	952	890
Technicians and Associate Professionals	1291	1216	1142	1067
Clerks	1292	1217	1142	1067
Service Workers and Sales Workers	1292	1217	1142	1067
Skilled Agricultural and Fisheries Workers	15084	14208	13333	12458
Craft and Related Trades Workers	1714	1614	1515	1416
Plant and Machine Operators and Assemblers	2977	2804	2631	2459
Elementary Occupations	10918	10284	9652	9017
TOTAL	36182	34080	31983	29884

From Table 4(n), it can be seen that in any given year, employment is concentrated in two occupational groups namely ‘Skilled Agricultural and Fisheries Workers’ and ‘Elementary Occupations’ and it is least in the highly skilled occupational groups. Over the years, it can be noticed that the total number of employees would continue to decrease reaching 29 884 by 2009-2010. The figures depicted that over the years , there would be fewer employees across all occupational groups.

QUESTION 3- State the number of employees you have/planning to have in your organisation according to their highest educational level

Table 4 (o) shows the estimated number of employees in the year 2006/2007 that employers are willing to have, classified according to their highest level of education.

Table 4(o): Estimated number of employees by highest educational level

Highest Educational Level	No. of employees in 2006/2007 in Agricultural sector
Primary	29453
Pre-Vocational	841
School Certificate	2524
Higher School Certificate	841
Vocational/Higher National Diploma (HND)	741
Diploma in related field	691
Degree /Postgraduate degree in related field	1091
TOTAL	36182

The Table 4(o) shows that in 2006 - 2007, the highest percentage of employees in the Agricultural sector would fall in the lowest educational bracket. It was obvious from the table that as the educational level got more advanced, the number of employees recruited decreased.

Question 4- State the number of employees trained/to be trained by occupational groups.

As a whole during the year 2005-08, it is expected to train fewer and fewer employees. The few occupational categories that would benefit from overseas training were the Senior Officials and Managers, Technicians and Associate Professionals and Elementary Occupations.

Senior Officials

The results of the survey indicated that during the year 2005-2008, the highest number of employees would be trained in local training centres and few on-the-job. No training would be conducted overseas for this category in the year 2005-06 while 6 percent of employees would be expected to go overseas for training in 2007-08.

Professionals

No overseas training would be dispensed in this occupational category. Training would be conducted in training centres for the majority of employees in this group and some employees would also benefit from on-the-job training. The number of employees trained was expected to decline over the years.

Technicians and Associate Professionals

In this occupational group, no employee would be trained on the job while only 19 would be trained in training centres in the year 2005-06. All training in 2006-2007 and 2007-2008 would be conducted overseas.

Clerks

No provision would be made for Clerks to be sent for overseas training during 2005-2008. In the year 2005-06, 50 percent of Clerks would be sent in local training centres while the other 50 percent would benefit from on-the-job training. In 2006-07 and 2007-08, all employees would be trained on-the-job.

Service Workers and Sales Workers

Training in this occupational group would be conducted only in 2005-06. It was expected that 50 percent of the workers would be trained in training centres and the remaining would be trained on-the-job.

Skilled Agricultural and Fisheries Workers

It was planned to train 20 percent of employees in training centres and 80 percent on-the-job in 2005-06. In 2006-2007, all employees would be trained on-the job while in 2007-2008, the majority of trainees (86 percent) would be trained on-the-job and 14 percent in training centre.

Craft and Related Trade Workers

For this occupational category, employers mentioned that they were not thinking of training any workers either in training centre or abroad. All employees would be trained on-the-job during 2006 - 2008.

Plant and Machine Operators

In the year 2005-06, more employees were trained on-the-job as compared to training centres (84 and 16 percent) respectively. However, in the years 2006-08, it was planned to train more Plant and Machine Operators in training centres and less on-the-job.

Elementary Occupations

No employee would be trained on the job for this occupational group. 50 percent of the employees would be trained on-the-job and overseas over the three years.

Table 4(p): Average amount to be spent annually on training (2005-2008)

Classification of employees	(000)
Legislators & Senior Officials & Managers	2933.82
Professionals	2486.58
Technicians & Associate Professionals	433.488
Clerical Workers	59.3662
Supervisors, Foremen, and Sirdars	125631
Plant & Machine Operators & Assemblers	1148.33
Elementary Occupations	117.522

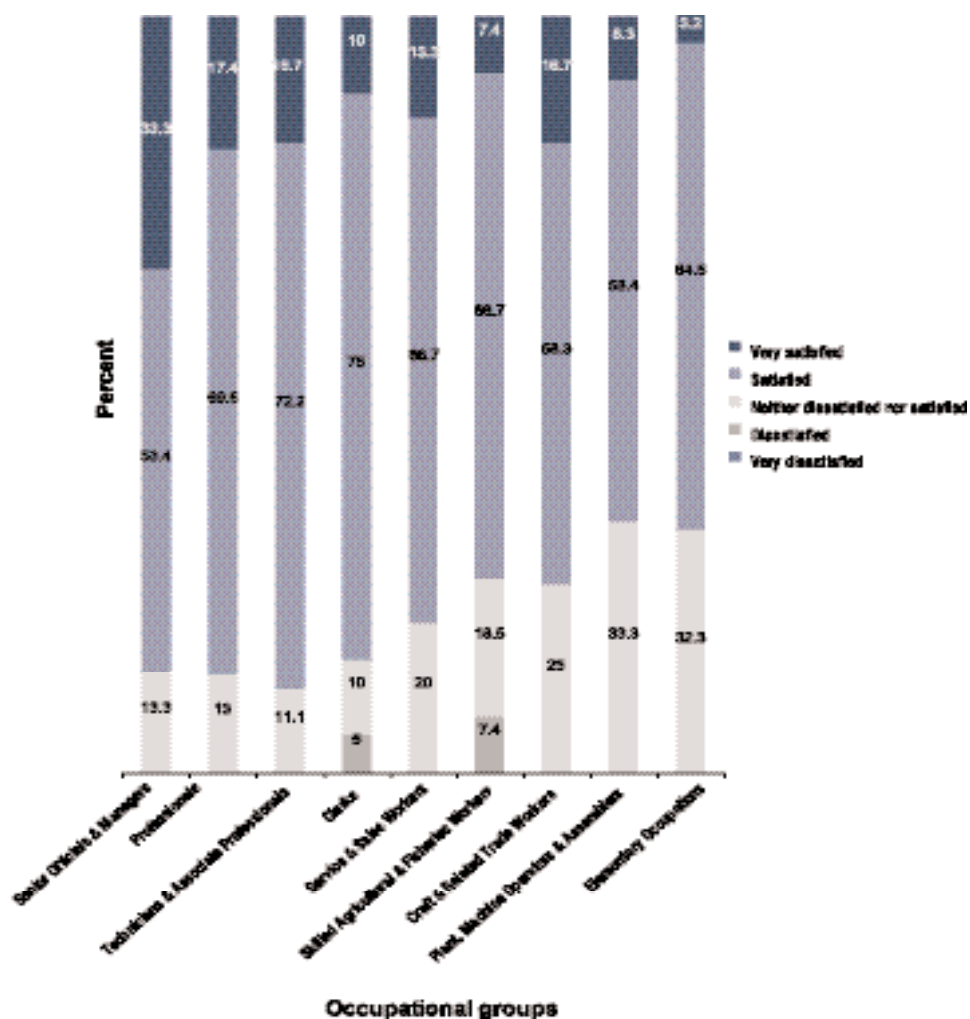
Table 4(p) shows that on an average, the highest amount of money would be spent annually on Supervisors, Foremen and Sirdars (Rs 125 631 000). The other occupational groups where large amounts of funds would be spent on training are on Legislators, Senior Officials and Managers (Rs 2 933 820) and Professionals (Rs 2 487 000). For Clerical workers, the least amount of money would be spent annually (Rs 59 366). It was estimated that employers would not invest at all in training their 'Service, Shop and Market Sales representatives' and 'Craft and Related Trade Workers.'

Duration of training (2005-2008)

It was expected that Technicians and Associate Professionals as well as employees falling under Elementary Occupations would spend 41 to 80 hours in effective training during the years 2005 to 2008. For Service Workers and Sales Workers and Craft and Related Trades Workers, it was planned that they would undergo 4-6 hours of training yearly. Professionals and Skilled Agricultural and Fisheries Workers would be expected to be trained for a minimum of 41-80 hours. Senior Officials and Managers would be spending a minimum of 13-40 hrs in training unlike Plant and Machine Operators and Assemblers who would benefit from a minimum of 1-3 hours only during 2005-2008. As far as Clerks were concerned, the minimum and maximum number of hours spent in training would be 4-6 hours and 13-40 hours respectively.

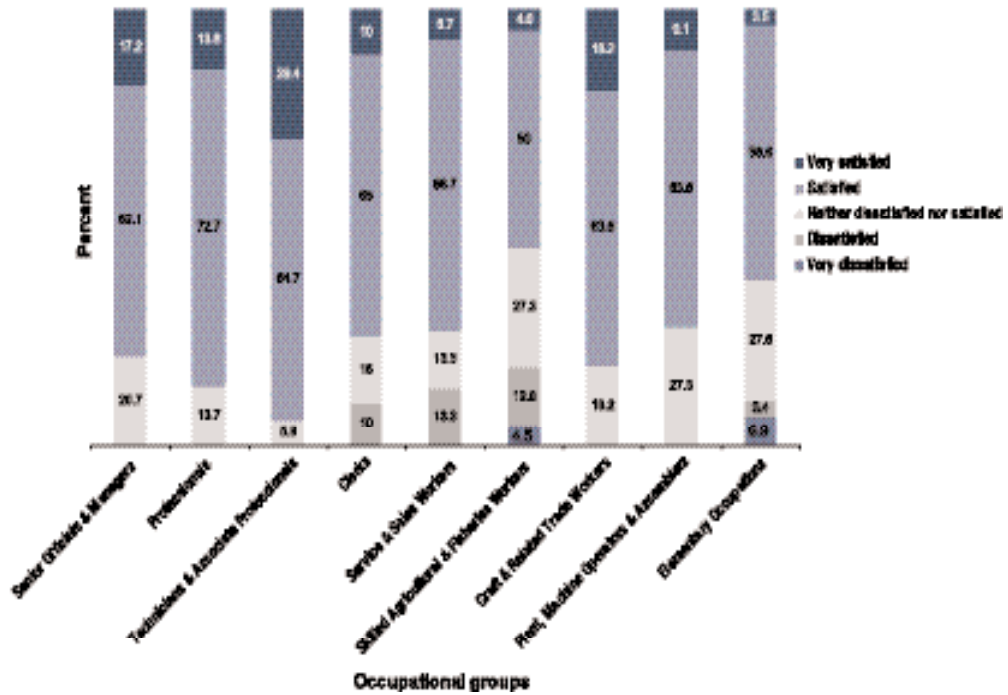
QUESTION 5- Please rate the following statements according to their satisfaction level for each occupational group.

a. Productivity of your current employees



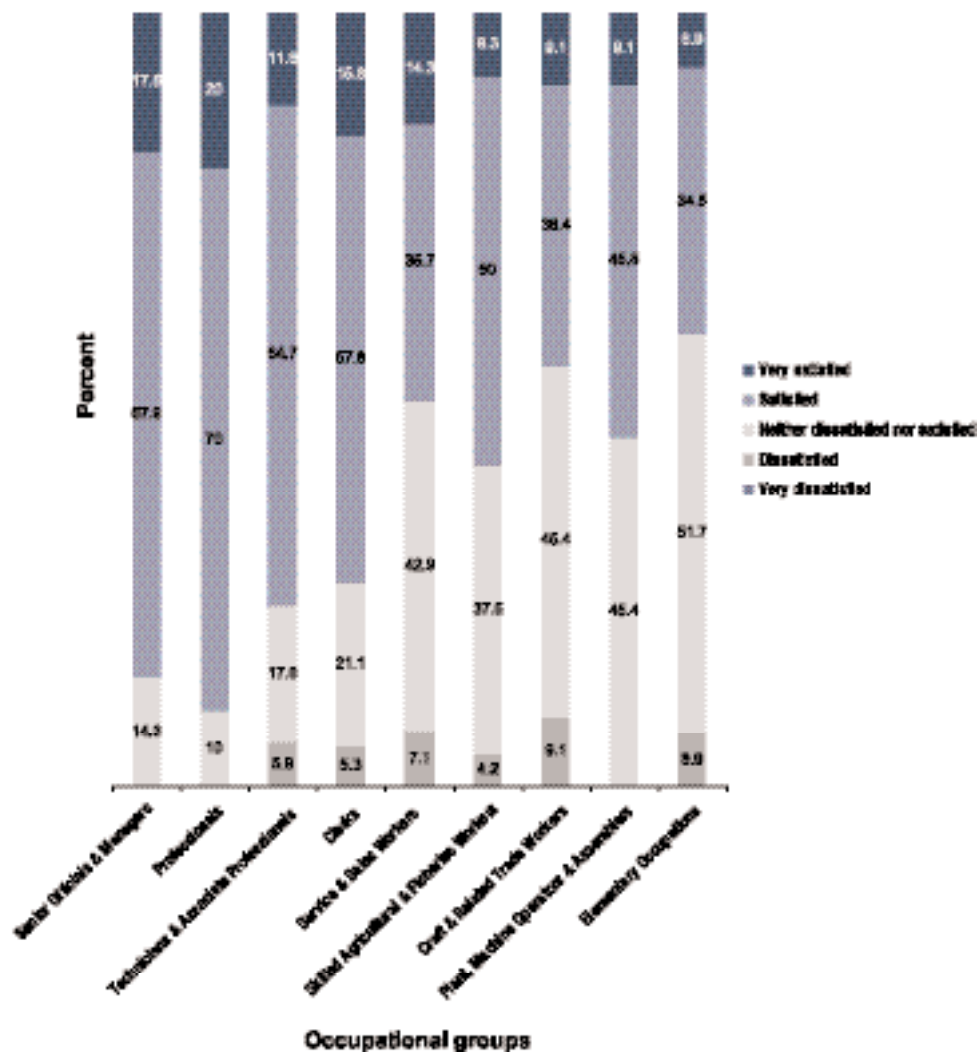
It was noted that the majority of employers were satisfied with the productivity of their employees. In the sugar cane industry, however, 16.7 percent of employers mentioned that they were dissatisfied with the productivity of their Skilled Agricultural and Fisheries Workers.

b. Qualification level of your employees



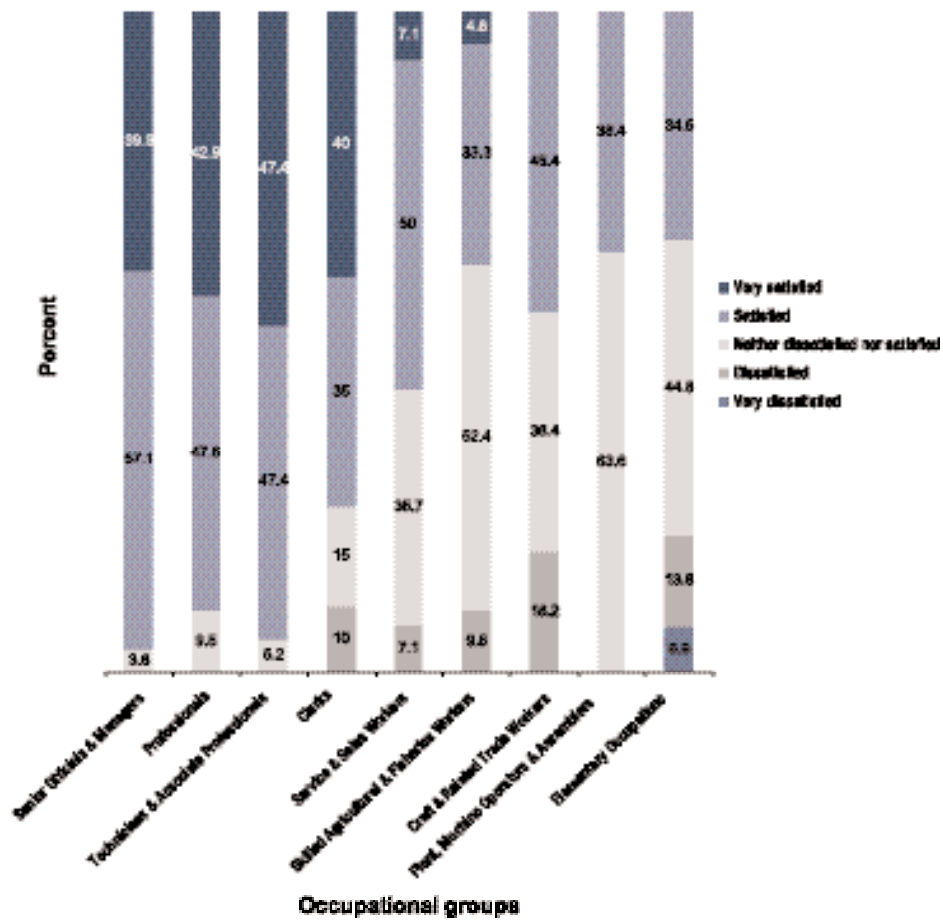
As a whole, employers were happy with the level of qualification of their employees. 50 percent of employers, who cultivate anthurium, were not satisfied with the qualification level of their Clerical Workers and Skilled Agricultural and Fisheries Workers. It was also noted that there was dissatisfaction among employers of “other flowers” as regards their Clerks, Service & Sales Workers and Skilled Agricultural and Fisheries Workers.

c. Previous work experience of your employees



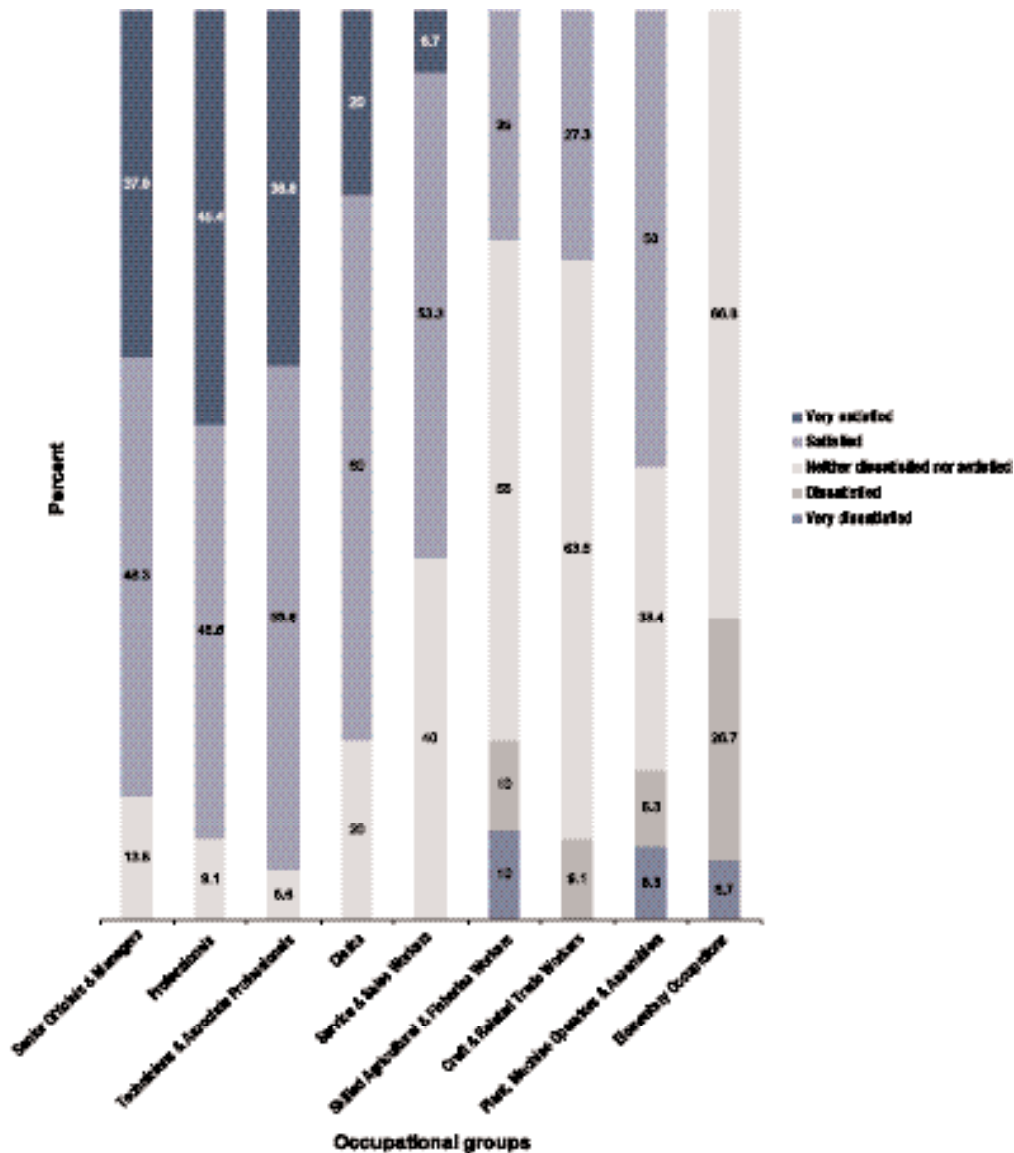
The majority of workers were satisfied with the previous work experience of their employees except for Service & Sales Workers, Craft and Related Trade Workers and Elementary Occupations where respondents said that they were neither satisfied nor dissatisfied with these categories of employees. It was found that employers working in “research and experimental development on natural sciences and engineering (NSE)” were fully satisfied with the previous work experience of their employees. In the “other flowers” subsector, respondents were dissatisfied with their Technicians & Associate Professionals, Clerks, Service and Sales Workers and Skilled Agricultural & Fisheries Workers.

d. Numeracy skills of your employees



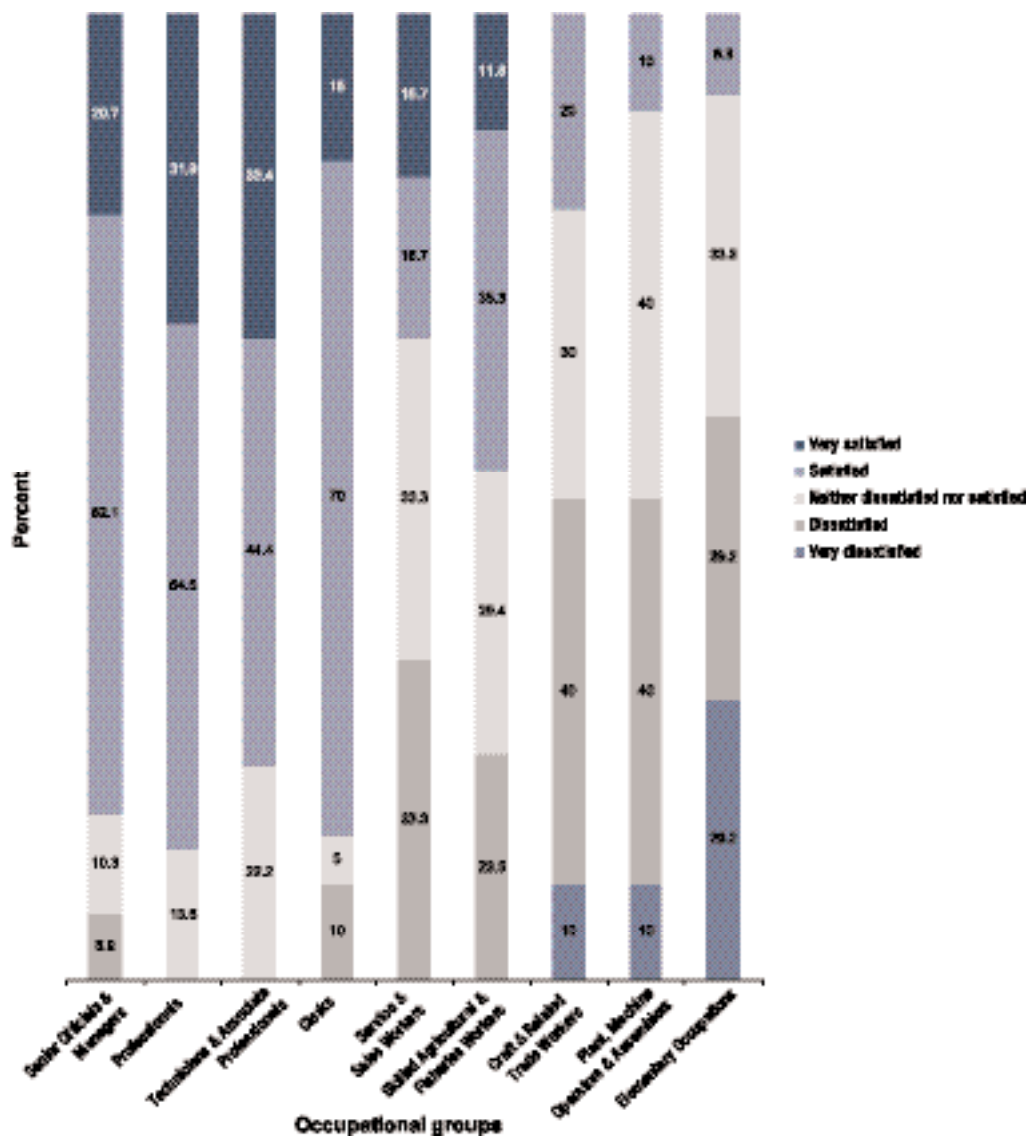
Over 60 percent of respondents were of the view that the numeracy skills of the first four occupational groups were either good or very good. For the remaining occupational groups, that is, Service and Sales Workers, Skilled Agricultural and Fisheries Workers, Craft & Related Trade Workers, Plant, Machine Operators & Assemblers and Elementary Occupations, maximum number of employers were neutral and satisfied. For the cold storage industry, employers found that the numeracy skills of their Clerks, Service & Sales Workers and Craft & Related Trade Workers were unsatisfactory.

e. Literacy skills of your employees



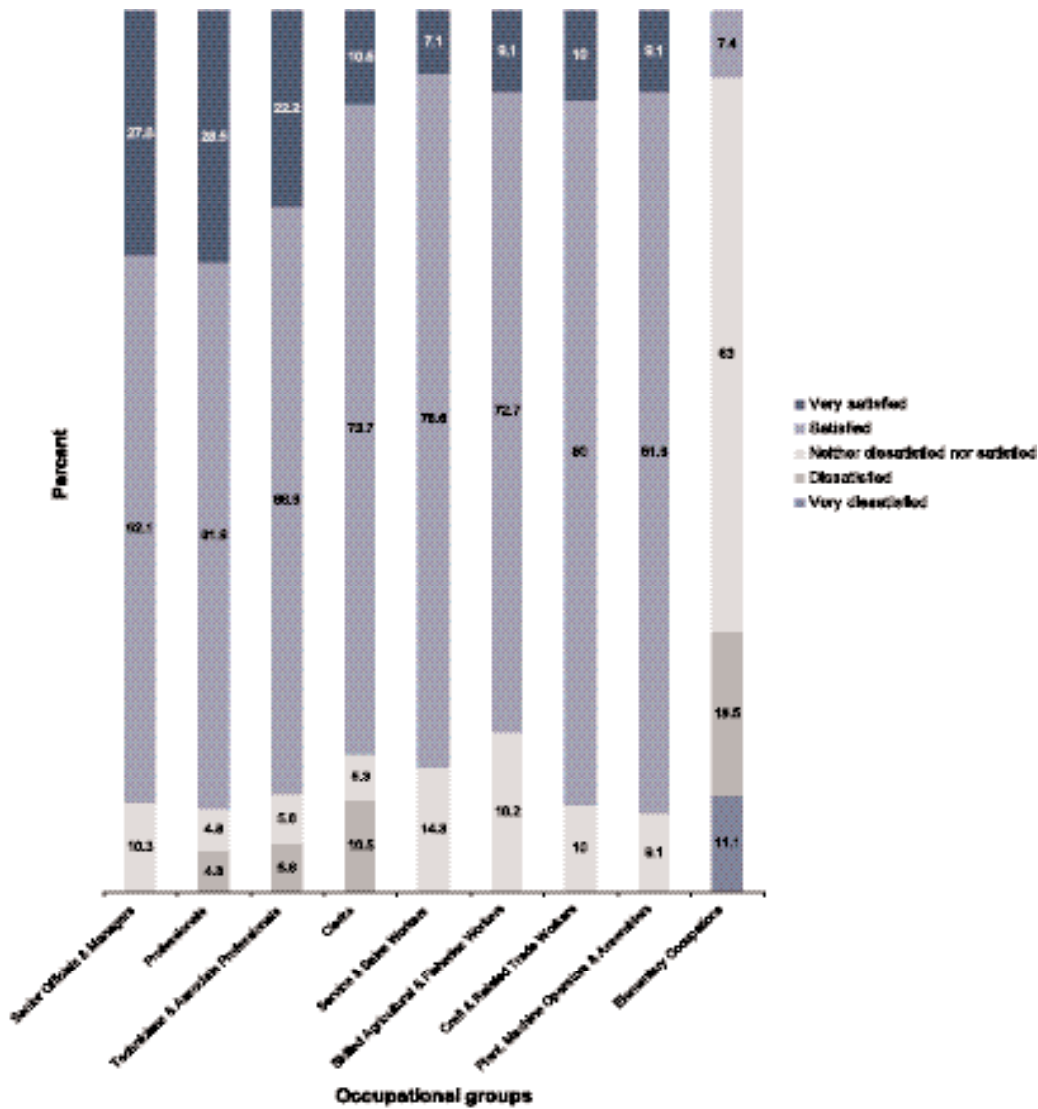
For the first four occupational groups, employers found that the literacy skills of their employees were either satisfactory or excellent. For occupational groups ranging from Service & Sales Workers to Elementary Occupations, majority of respondents either did not take a stand or mentioned that they were satisfied. 50 percent of respondents in the potato industry stated that they were dissatisfied with the literacy skills of the Skilled Agricultural and Fisheries Workers, Craft & Related Trade Workers and Plant, Machine Operators and Assemblers while for Elementary Occupations, they were totally dissatisfied. In the sugar cane industry, 14.2 percent of respondents were not satisfied with their Skilled Agricultural and Fisheries Workers.

f. ICT (computer skills) proficiency



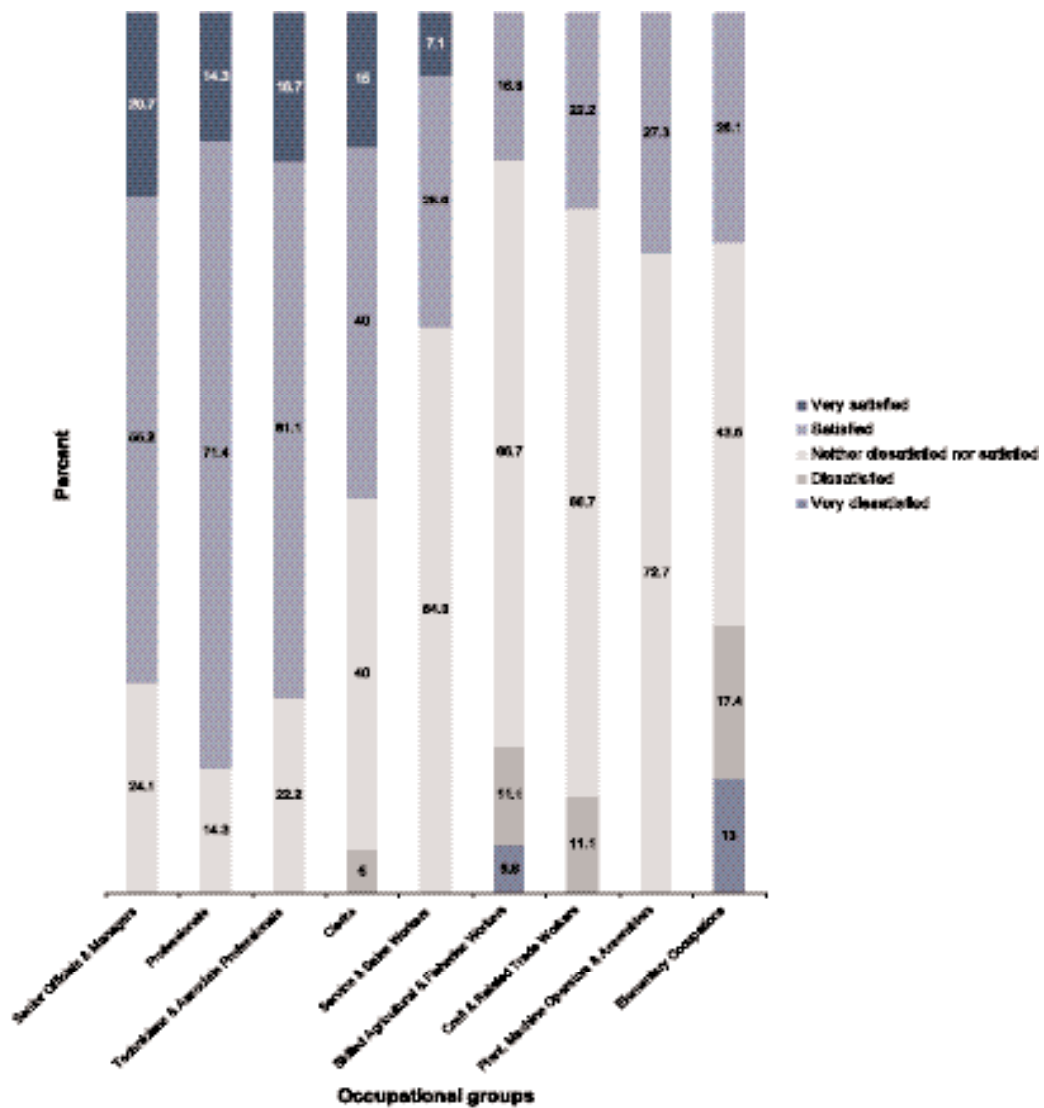
For occupational groups ranging from Senior Officials and Managers to Clerks, the majority of employers mentioned that they were very satisfied or satisfied with the computer skills of these categories of workers. For Service and Sales Workers up to Elementary Occupations, the majority of employers believed that these employees were not proficient in ICT. Employers believed that employees under Craft and Related Trade Workers, Plant, Machine Operators and Assemblers and Elementary Occupations in the irrigation industry were good at computer skills.

g. The specific skills of your employees to do their job correctly



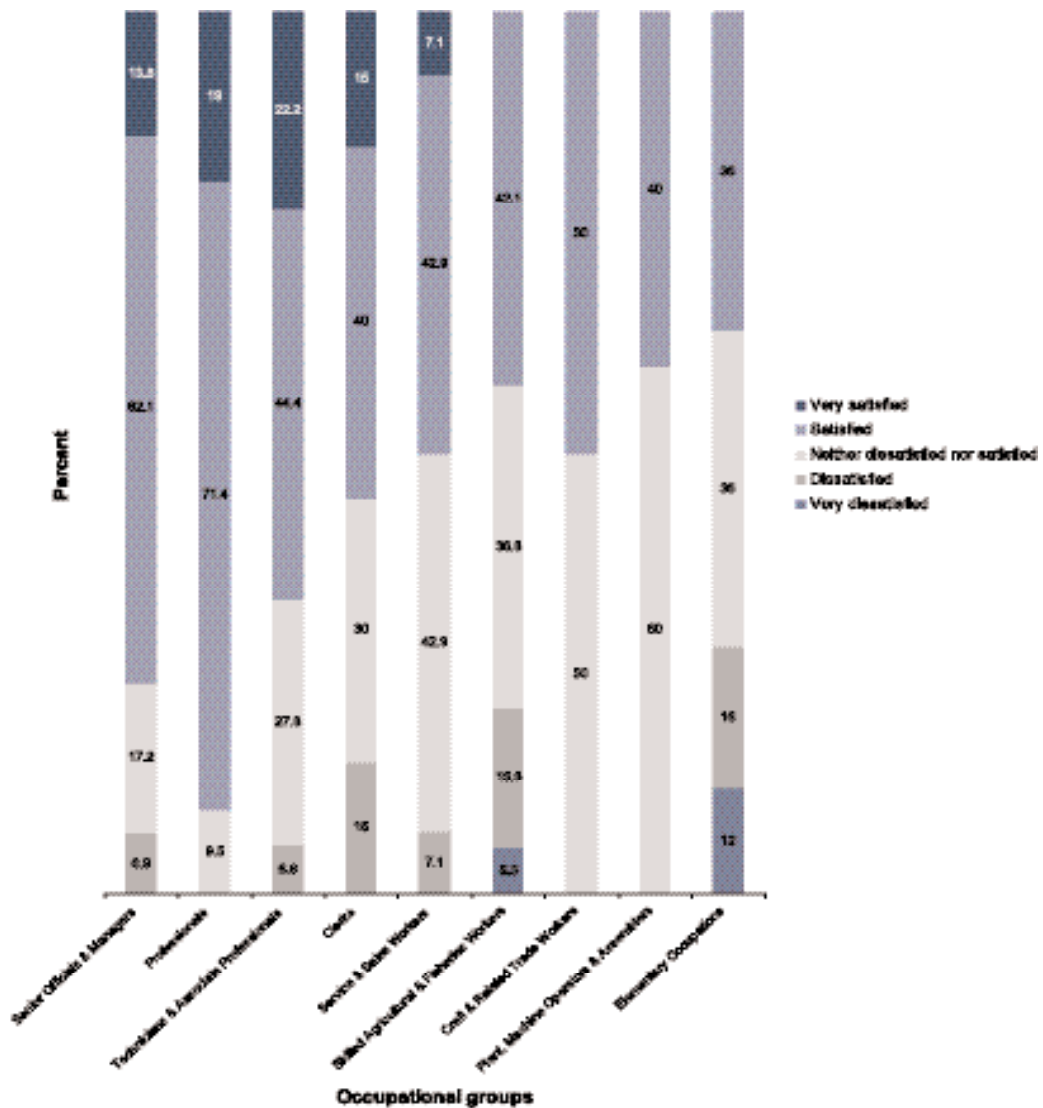
The highest number of employers surveyed mentioned that they were satisfied as a whole with their employees as regards their specific skills for performing their job correctly. 50 percent of employers in “other flowers” mentioned that they were dissatisfied with their employees falling under the Professionals, Technicians and Associate Professionals and Clerical occupational groups. It was also noted that employers of the research and experimental development on natural sciences and engineering (NSE) were fully satisfied with the specific skills of their employees to carry out their work effectively.

h. Knowledge of basic science possessed by your employees



It was found that the majority of respondents were neutral or satisfied as regards this statement. In the field of ‘research and experimental development on natural sciences and engineering (NSE)’, it was noted that employers were very satisfied with their employees falling in the range of Senior Officials and Managers to Service & Sales Workers. In the anthurium subsector, it was found that 50 percent were very dissatisfied with their employees in Elementary Occupations, one third of employers were dissatisfied with their Skilled Agricultural & Fisheries Workers and 50 percent dissatisfied with the knowledge of basic science of their Clerks.

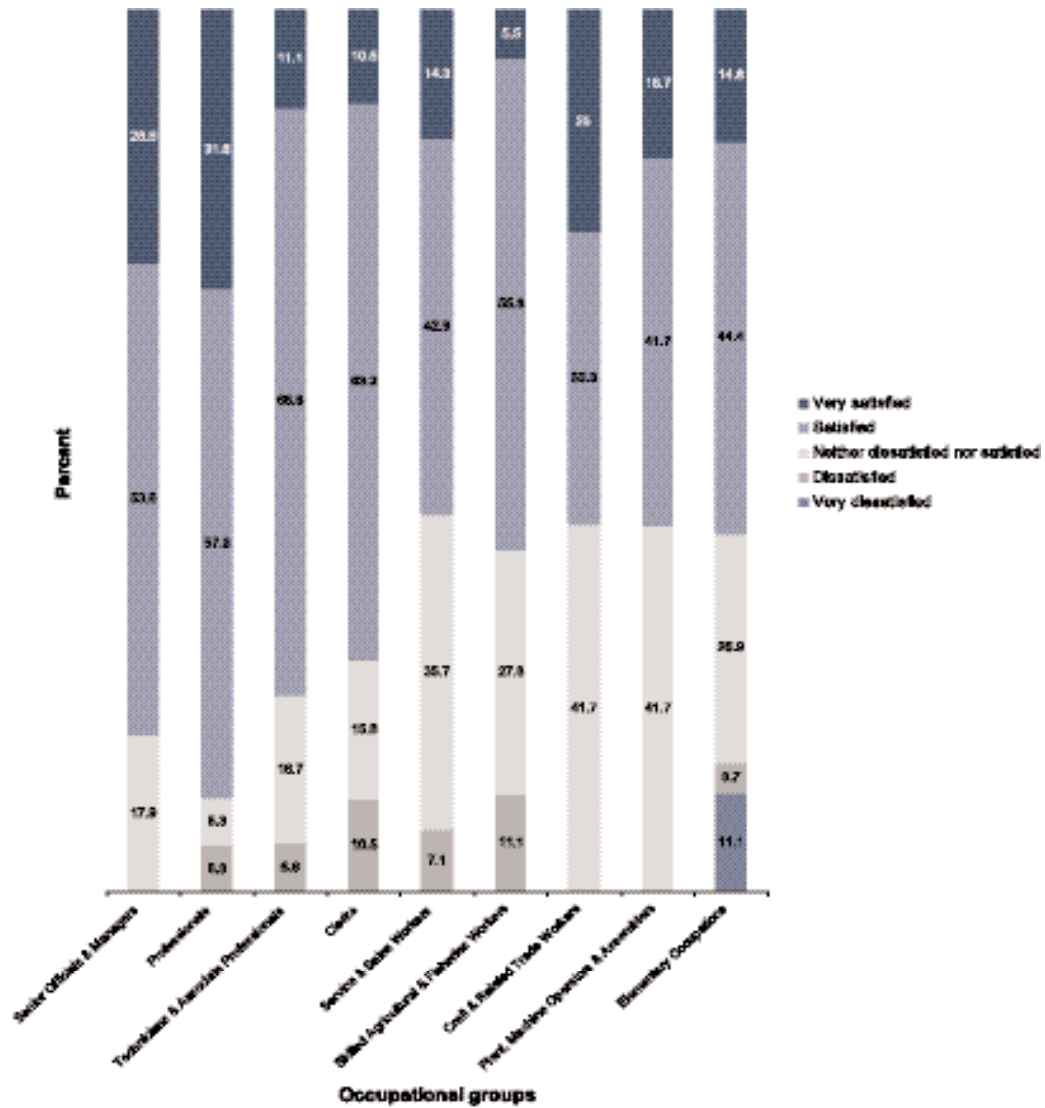
i. Creativity, thinking and innovation skills of your employees



From Senior Officials and Managers to Craft & Related Trade Workers, majority of employers mentioned that they were satisfied with the creativity, thinking and innovation skills of these categories of employees.

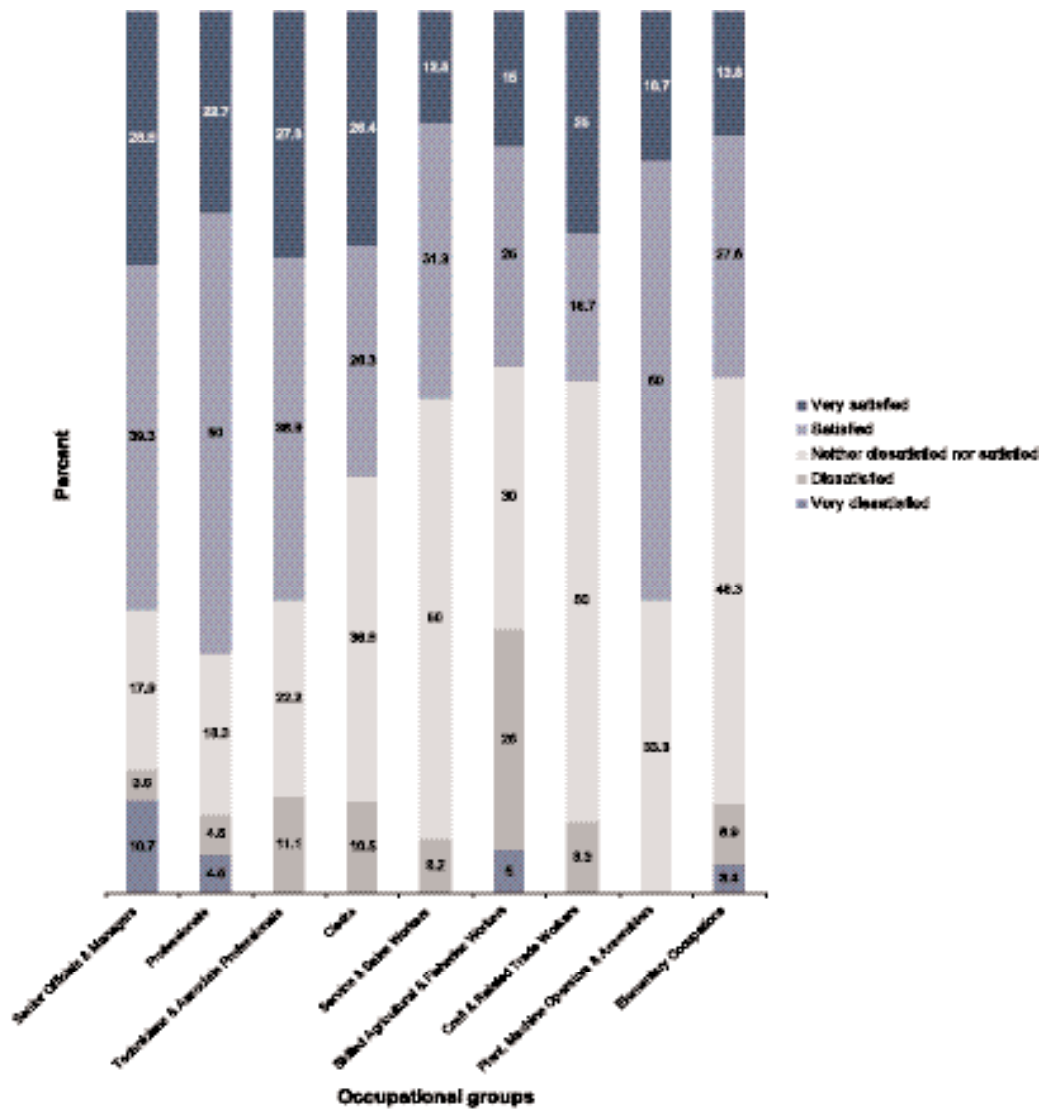
For Plant, Machine Operators & Assemblers, the highest number of respondents did not want to take a stand on this statement. In the NSE, it was found that employers were very satisfied with the creativity, thinking and innovation skills of their Senior Officials, Professionals, Technicians & Associate Professionals, Clerks and Service & Sales Workers. In ‘other flowers’, employers stated that the creativity, thinking and innovation skills of their Technicians & Associate Professionals, Clerks, Service & Sales Workers and Skilled Agricultural and Fisheries Workers were not satisfactory.

j. Motivation of employees to achieve organisational goals



The majority of respondents mentioned that their employees were either motivated or very motivated to achieve organisational goals. For all occupational groups, employers in the cold storage and NSE were very satisfied with the motivation of their employees. In ‘other flowers’, for all occupational groups except Craft & Related Trade Workers and Plant, Machine Operators and Assemblers, a dissatisfaction was registered among employers.

k. Willingness to work on shift system/odd hours when required



For the first four highest occupational groups and Plant, Machine Operators and Assemblers, the majority of employers stated that they were satisfied and very satisfied because their employees were willing to work odd hours whenever required. It was noted that regarding the Service Workers & Sales Workers, Skilled Agricultural & Fisheries Workers, Craft and Related Trade Workers and Elementary Occupations, majority of employers did not want to take any stand on this statement. In the field of NSE, employers were totally satisfied with all their employees. For ‘other flowers’, a dissatisfaction was recorded among employers in relation to their Professionals, Technicians & Associate Professionals and Clerks.

QUESTION 6- During the last recruitment made, have you been able to employ candidates with the required:

Skills

53.7 percent of respondents stated that they were able to employ candidates with the required skills while 46.3 reported they did not.

Qualifications

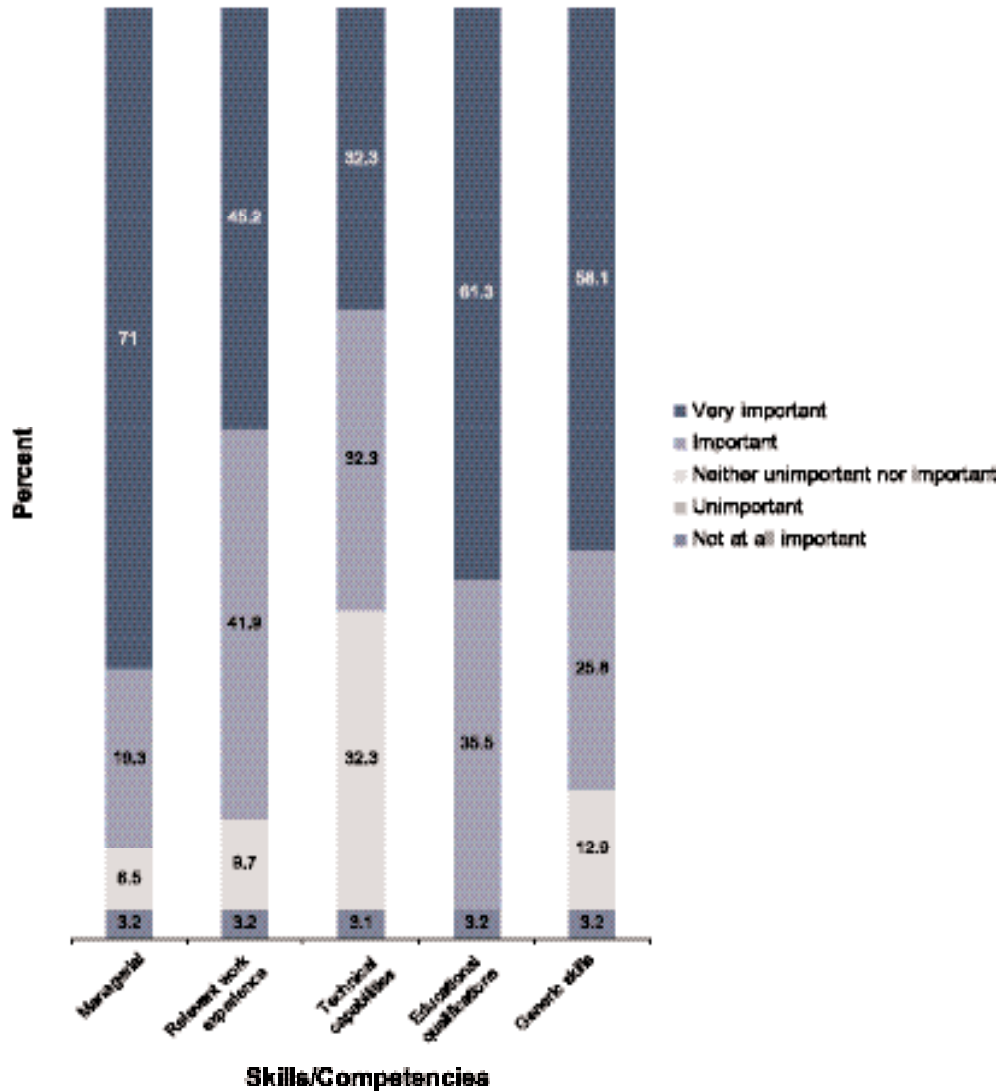
Out of every two employers surveyed, one said that he was able to employ candidates with the right qualifications. However, in the sugar cane and other vegetables industries, more employers reported that they did not find candidates with the required qualifications.

Work Experience

The majority of respondents (54.5 percent) stated that they did not find employees with the required work experience in their last recruitment as compared to 45.5 percent who did.

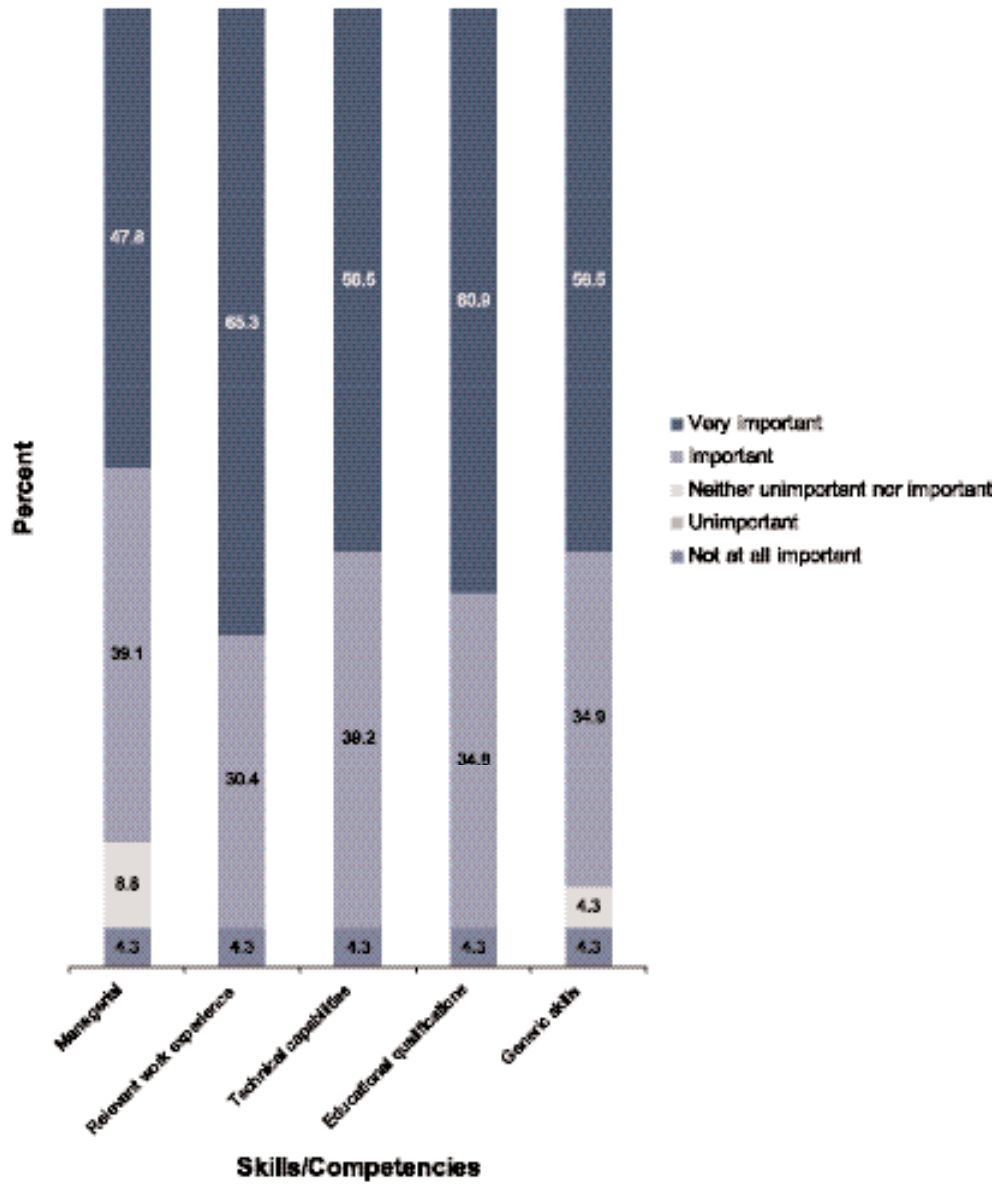
QUESTION 7- For each occupational group, rate the following skills/competencies according to their importance while recruiting people in your organisation.

a. Senior Officials and Managers



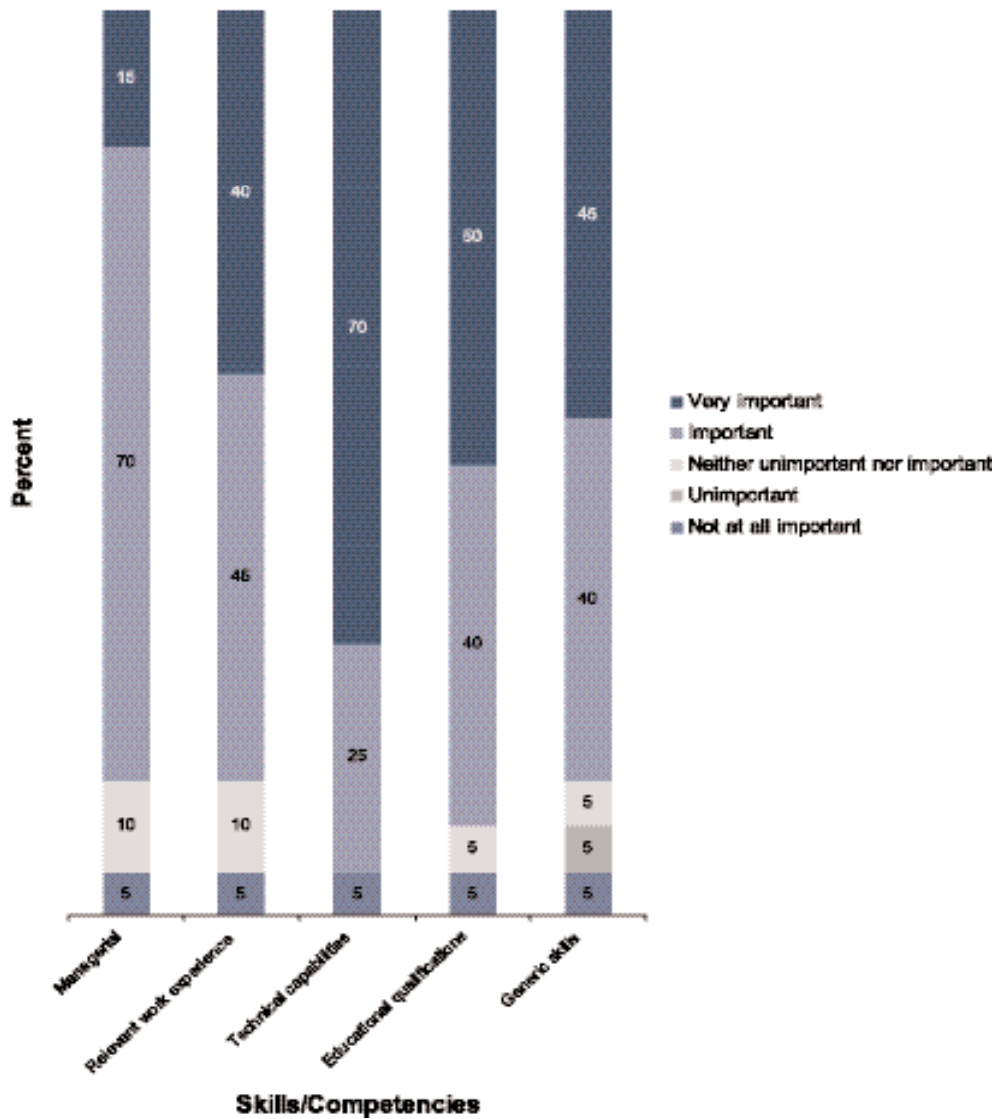
The majority of respondents stated that for Senior Officials and Managers, all the skills/competencies were very important.

b. Professionals



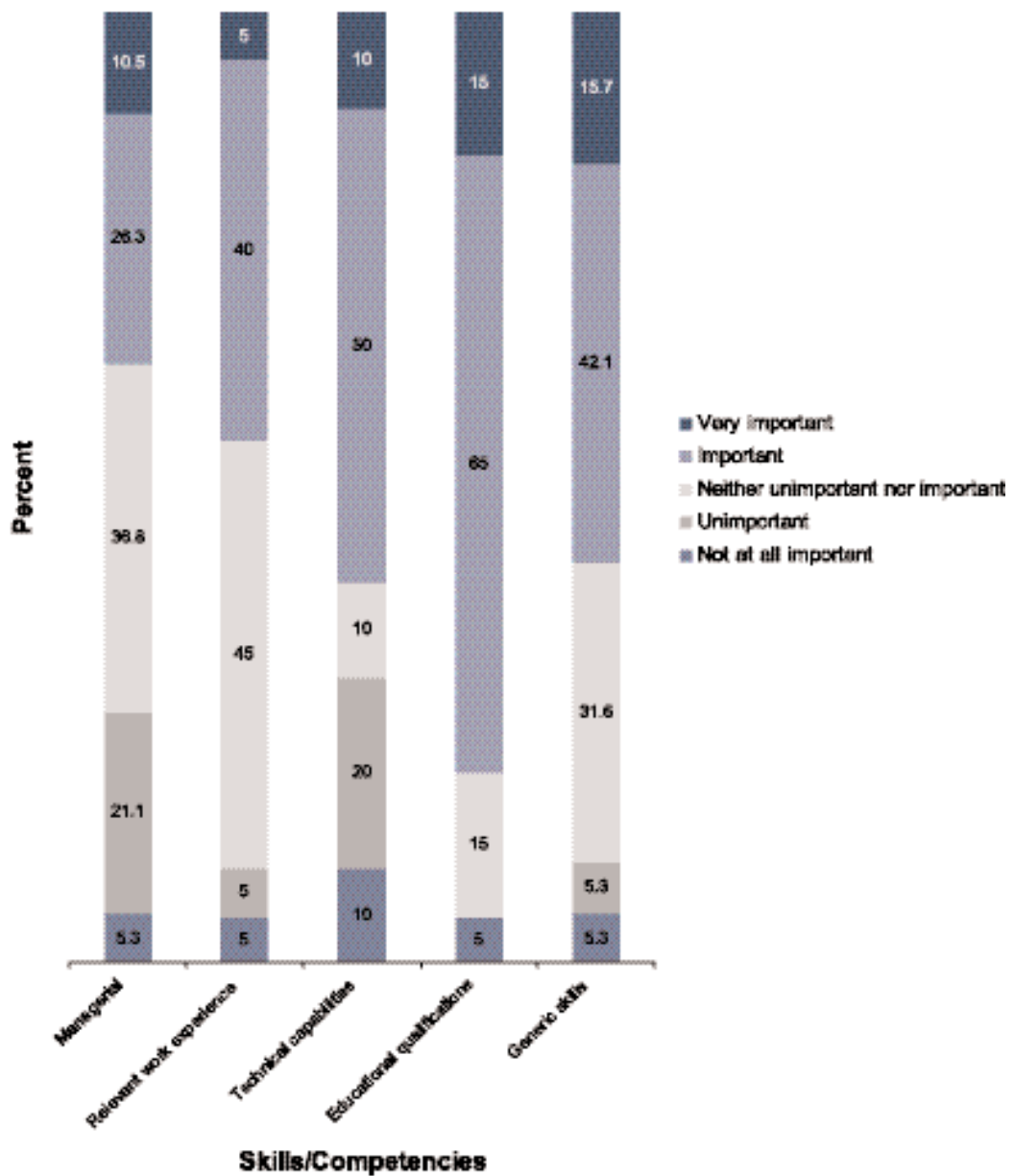
The highest percentage of respondents mentioned that the skills and competencies were found to be very important for Professionals.

c. Technicians and Associate Professionals



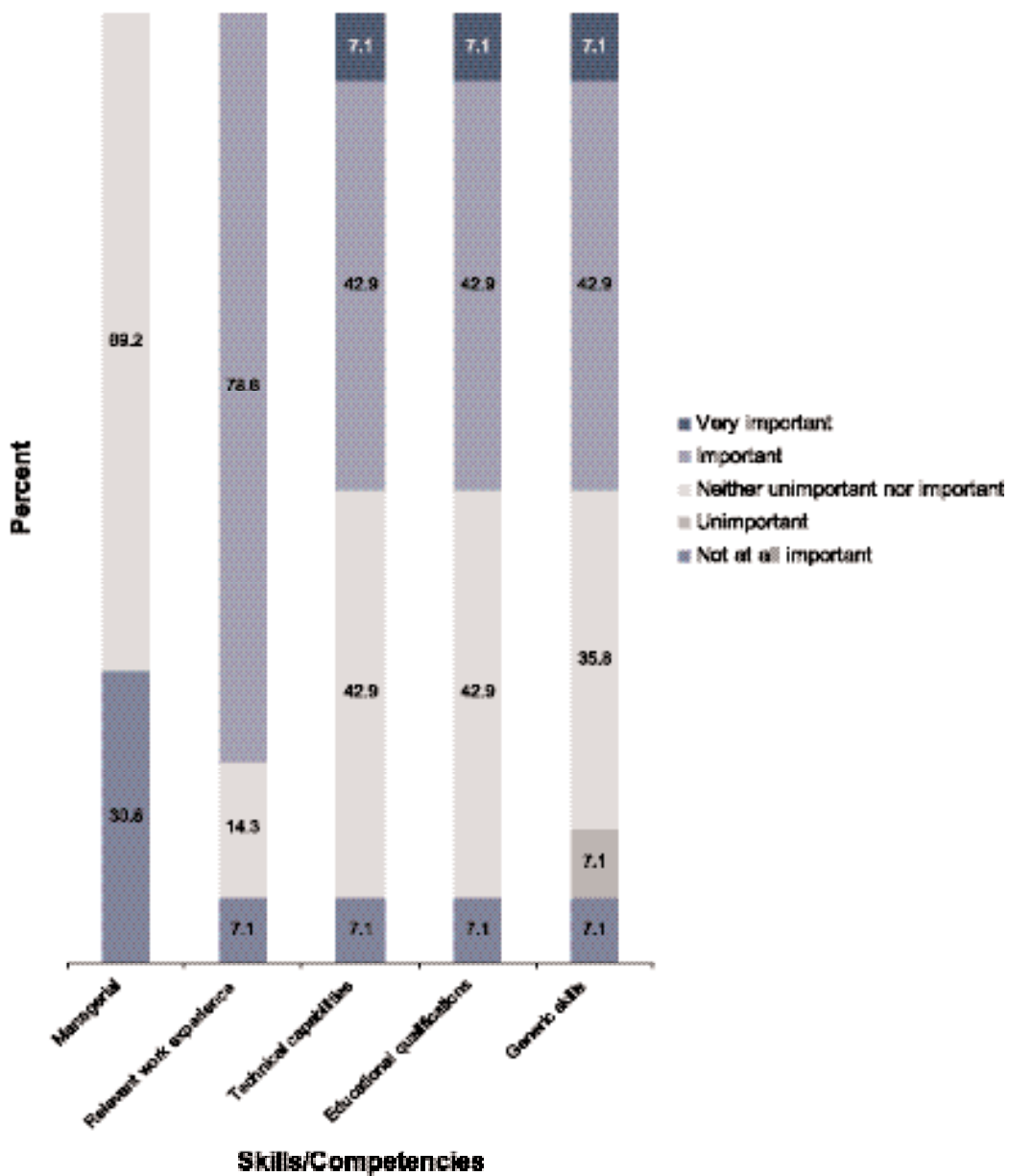
For this occupational group, as a whole, all respondents said that they found the various skills/occupations as being either very important or important. However, as regards managerial skills, employers of “other vegetables” and “other flowers” did not want to take a stand on that statement. Besides, generic skills for Technicians and Associate Professionals in the “business and management consultancy” were viewed as being unimportant.

d. Clerks



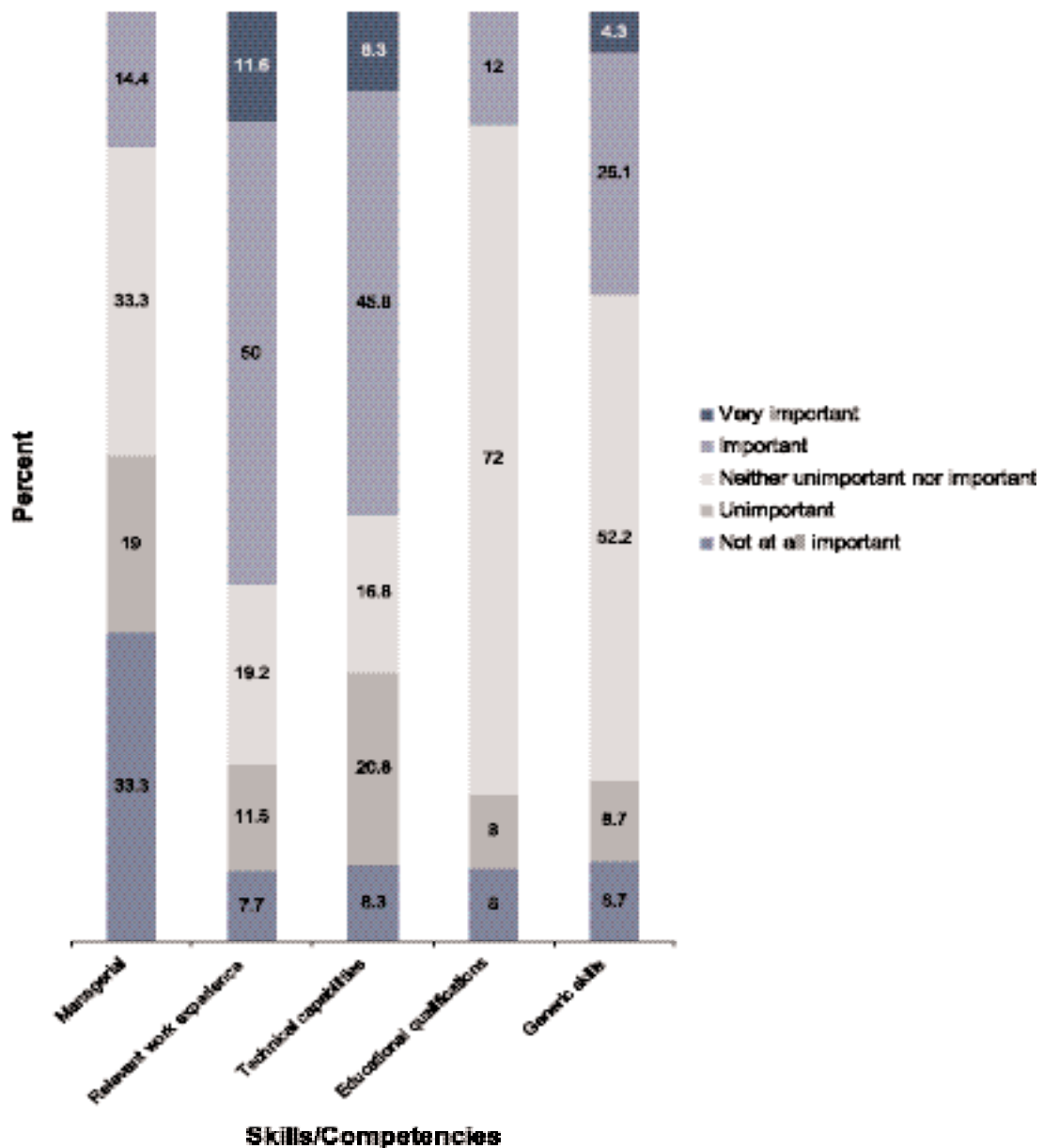
75 percent of employers viewed all the skills and competencies related to Clerks as neither unimportant nor important. It was noted however that 14.3 percent of respondents mentioned that these skills and competencies were not at all important for employees holding clerical posts.

e. Service Workers and Sales Workers



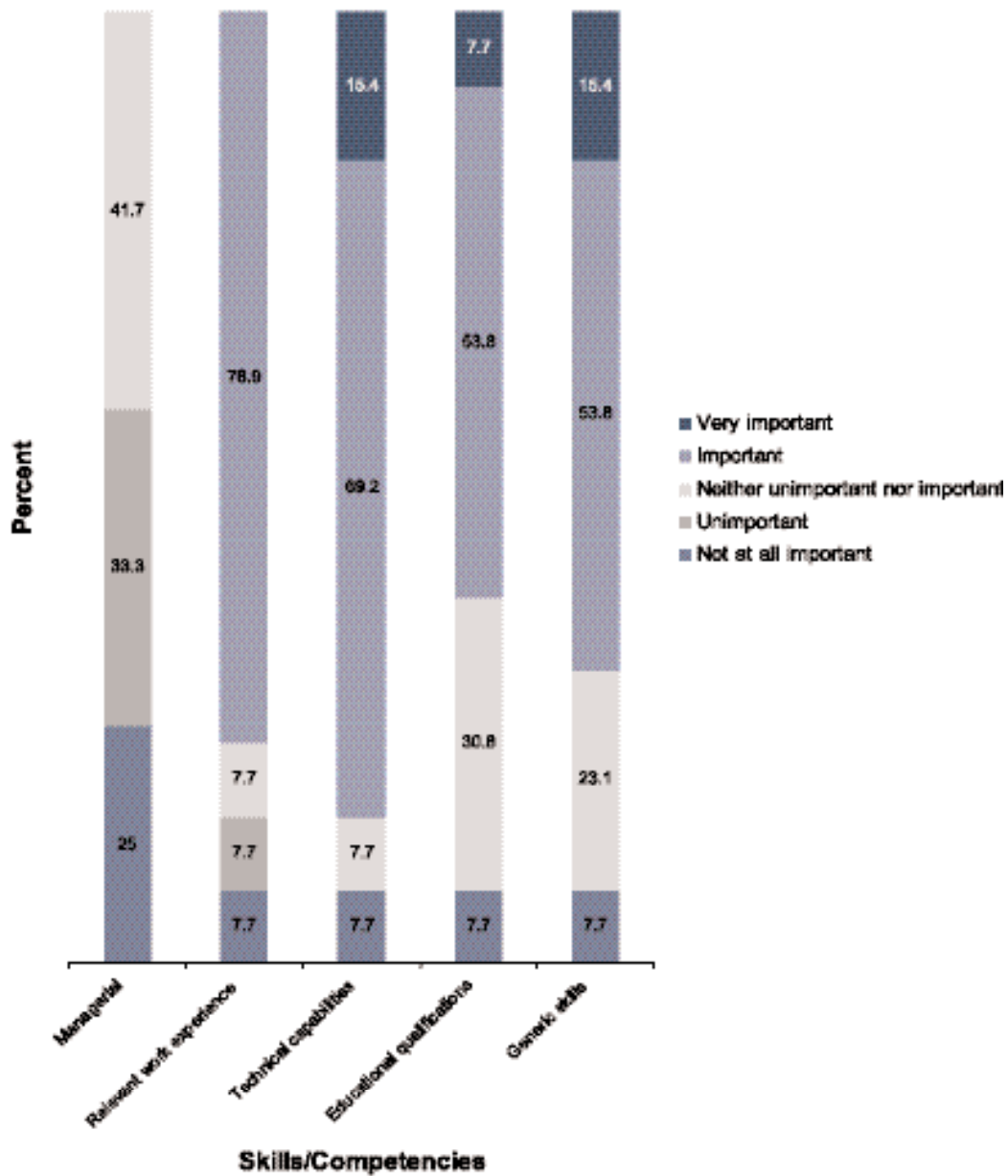
The majority of respondents said that it was neither unimportant nor important for this category of workers to be equipped with the various skills and competencies. In the sugar cane industry, it was found that 20 percent of respondents mentioned that the various skills and competencies were not at all important for Service Workers and Sales Workers. Employers involved in potato plantation and in research and experimental development on natural sciences and engineering also said that managerial skills were not at all important for this occupational group. On the contrary, technical capabilities and educational qualifications were found to be of paramount significance for Service Workers and Sales Workers employed in the business and management consultancy and cold storage industries.

f. Skilled Agricultural and Fisheries Workers



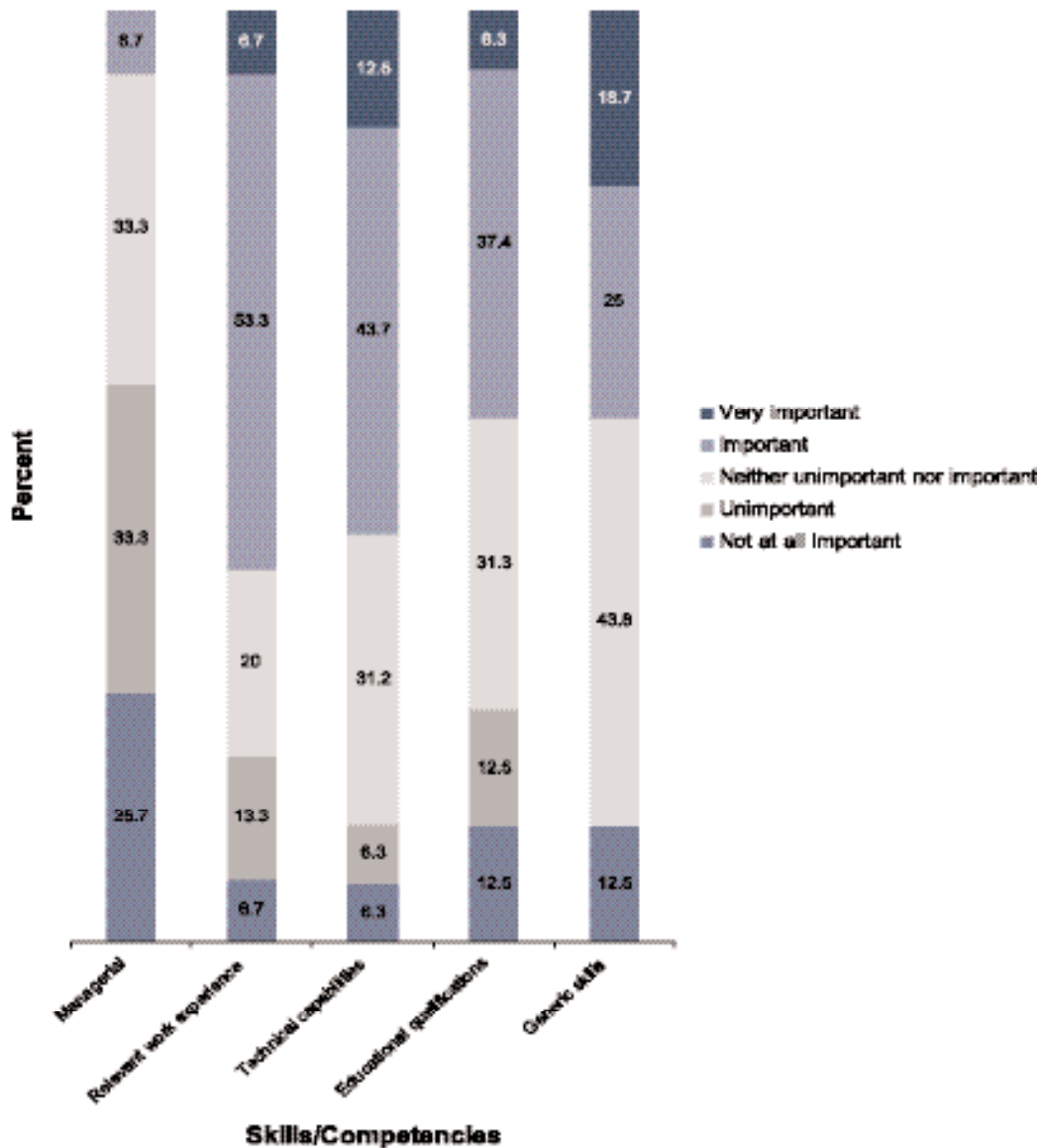
Most employers mentioned that relevant work experience, technical capabilities, educational qualifications and generic skills were neither important nor unimportant. However, it was found that one third of respondents were of the view that Skilled Agricultural and Fisheries Workers did not need managerial skills if they were to be recruited. 50 percent of employers involved in deer rearing found that technical capabilities and generic skills were very important for this category of occupations. Employers who cultivated potatoes were of the view that for this occupational group, managerial skills, relevant work experience and technical capabilities were not at all important and unimportant.

g. Craft and Related Trade Workers



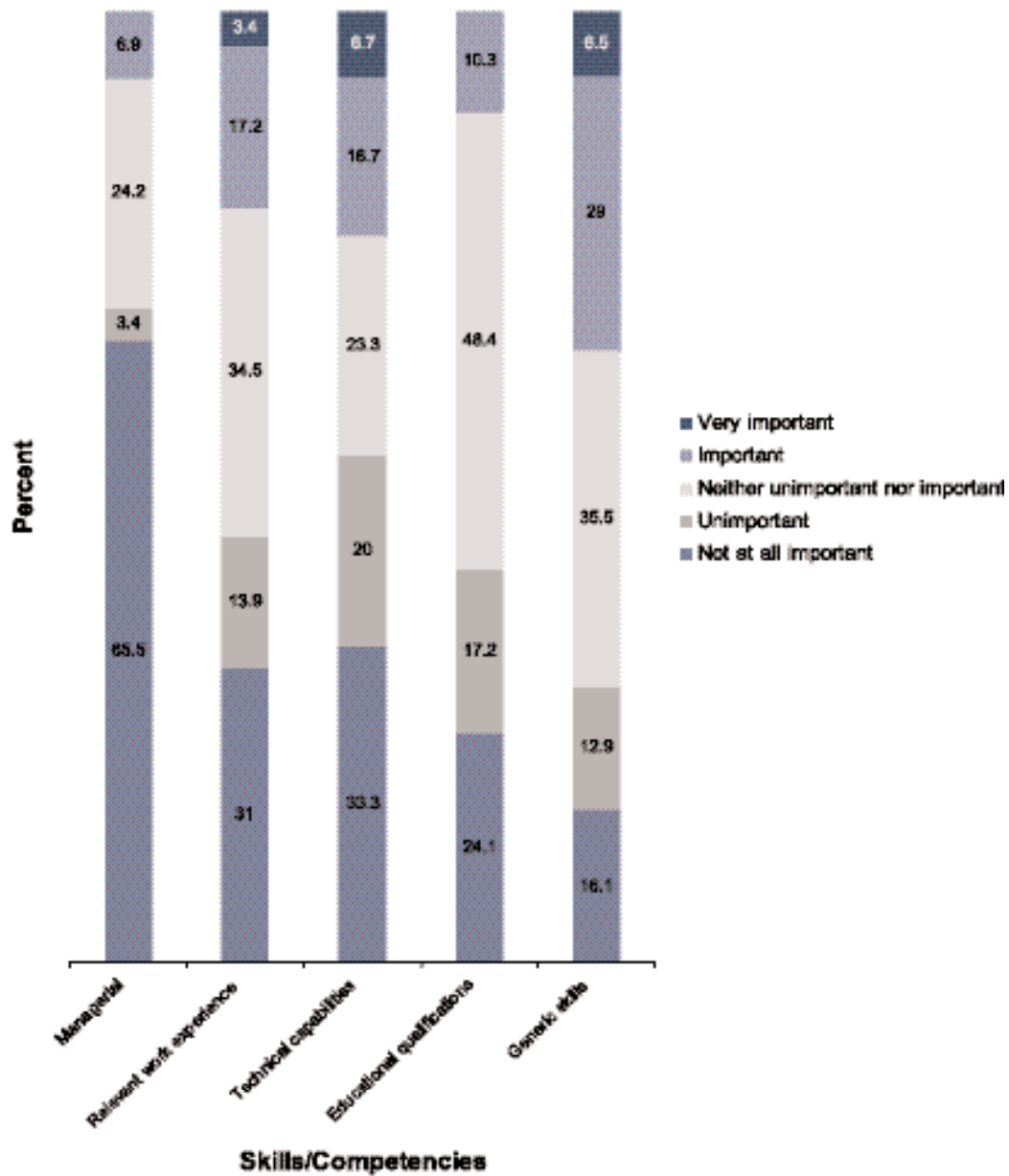
58.3 percent of employers found that managerial skills were not important for Craft and Related Trade Workers while over 50 percent of respondents mentioned that employees falling under this occupational group needed to possess the other remaining skills and competencies. 20 percent of respondents in the sugar cane industry said that all the skills and competencies were not at all important for Craft and Related Trade Workers. Technical capabilities, educational qualifications and generic skills were considered to be very important for employees working in cold storage industry.

h. Plant and Machine Operators & Assemblers



The majority of respondents stated that it was important and neither unimportant nor important for employees under this occupational group to have relevant work experience, technical capabilities, educational qualifications and generic skills. 60 percent of employers surveyed found that managerial skills were not important for Plant and Machine Operators and Assemblers. It was found that 16.3 percent of respondents from the sugarcane industry were very pessimistic about the fact that Plant and Machine Operators & Assemblers needed the various skills and competencies. Employers from the cold storage mentioned that employees of this occupational category needed, to a large extent to have technical capabilities, educational qualifications and generic skills if they wanted to be recruited.

i. Elementary Occupations



The majority of respondents said that for Elementary Occupations, managerial skills, relevant work experience, technical capabilities and educational qualifications were not at all important and neither unimportant nor important. For generic skills, it was found that 35.5 percent of employers did not take a stand on this fact while 29 percent thought that it was important. In ‘anthurium cultivation’, 25 percent of employers mentioned that it was important for employees falling under Elementary Occupations to have relevant work experience, technical capabilities and educational qualifications and that it was also very important for them to have generic skills.

QUESTION 8- State the field(s) in which it is difficult to recruit people for your organisation. State the total number of employees you would require in each field during 2006-2010.

For this question, 3 respondents in the sugarcane industry said that because their organisations were being downsized, it would be difficult for them to answer.

Table 4(q) is a summary of the results from the various subsectors. The forecasts are given in Table 4(v).

Table 4(q): Summary of results from the various subsectors

Field	Job Title	Minimum qualifications required
Sugar Cane		
Agriculture	Labourers/Sugarcane cutters	No qualification
Draughtsmanship	Draughtsman	SC, Computer Literate-Autocad
Sugarcane	Labourers	Primary
Surveying	Land Surveyor	Degree Holder
Sugarcane	Field Workers	Experience
Tobacco		
Planters	Planters and trimmers	Primary
Other vegetables		
Agriculture	Worker	Nil
Anthurium		
Agriculture	Gardeners	CPE
Skilled Workers	Packing/selection of flowers	Secondary
Other flowers		
Veterinary Science	Research Scientist	BSc (VET Science)
Cattle		
Poultry processing	Production Officer	Diploma
Other service activities		
Health and safety	Health & Safety Officer	Diploma
Business and management consultancy		
Marketing	Marketing Manager	Degree and experience

From the Table 4(q), it was clear that more people were required in the sugar cane subsector where many employers mentioned that it was difficult even to find labourers with low or no qualifications at all.

Question 9- State the total number of employees per field of study (wherever possible specify the course e.g NTC 2, ACCA etc.) to be trained (T) and number of people to be recruited (R) by your organisation by 2010.

Below is a summary table of all the information collected from the manpower survey:

Table 4(r): Estimated number of employees to be trained and recruited

Field of Study	Estimated number of employees							
	Certificate		Vocational		Degree		Postgraduate	
	T	R	T	R	T	R	T	R
Sugarcane								
IT	-	-	-	-	-	40	-	-
Secretarial	-	20	-	40	-	-	-	-
Draughtsmanship	-	-	40	-	-	-	-	-
NTC 2	-	-	201	-	-	-	-	-
Other flowers								
Crop Production	-	-	-	-	-	-	483	-
Animal production	-	-	-	-	-	-	221	-
Biotechnology	-	-	-	-	-	-	242	-
Crop protection	-	-	-	-	-	-	242	81
Other service activities								
ACCA	-	-	-	-	20	-	-	-
ICSA	-	-	-	-	20	-	-	-
Project Management	-	-	-	-	-	-	20	-

Table 4(r) shows that the majority of employees to be recruited and trained by 2010 fall in the higher educational group (degree and postgraduate level). This meant that employers were willing to invest in those employees who had a higher educational attainment.

QUESTION 10- Please state area(s) in which it is difficult to find local trainers to train your employees.

Three employers in the sugar cane industry said that they were not experiencing any difficulties to find local trainers because they had their specific training centre, the Regional Training Centre (RTC), formerly known as the RASITC. However, others had mentioned the following:

Table 4(s): Areas & Difficulties in finding corresponding Trainers

Areas	Difficulties
Sugarcane	
Surveying, public relations	-
Bell operator	Appropriate training was not available
Draughtsmanship	Appropriate training was not available
Anthurium	
Agriculture	No specific training institutions
Packing	Expertise in selection of flowers is rare
Irrigation	
Operation of agricultural machines	There was no systematic approach in training the employees since the latter learn the job from their predecessors.
Research and experimental development on natural sciences and engineering (NSE)	
Advanced Scientific Research	
Business and management consultancy	
Leadership, communication	Competent trainers are rare

It could be found that it was difficult to find local trainers in various sub sectors of the Agricultural sector.

QUESTION 11

a. Does your organisation have an in-house training centre?

The majority of respondents (90 percent) said that their organisations did not have an in-house training centre. Only 10 percent reported that they did have such a training facility.

b. If yes, is the centre affiliated to other institutions?

Three quarter of employers, who had training institutions, were affiliated to other international institutions as compared to 25 percent who were affiliated to local institutions.

QUESTION 12- State the number of employees who resigned from your organisation last month

Table 4(t): Number of employees who resigned last month

Number of employees who resigned last month	Percentage
0	10
1	10
2	30
3	20
5	20
70	10

The Table 4(t) shows that 30 percent of employers mentioned that 2 employees had resigned last month, 20 percent said that 3 and 5 workers had quitted in the course of last month. 10 percent reported that 70 employees had resigned. 10 percent said that one employee had left and another 10 percent said that no one left the organisation.

QUESTION 13- How much did you spend on your last recruitment advertisement?

50 percent of the employers said that they spent up to Rs 8000 on their last recruitment while the remaining 50 percent spent a maximum of Rs 36 000.

QUESTION 14- In the absence of natural resources, Mauritius has no choice but to rely on its human resources. According to you, what can be done to have a critical mass of human resources with the right skills and competencies that can be readily absorbed by our labour market?

Two respondents said that nothing could be done as this sector would become totally capital intensive and its future looked gloomy.

It was widely believed that education and training were important assets for achieving high rate of productivity. First of all, there was a need to conduct a training needs analysis in order to provide specific training/courses to the persons. Training should be viewed as a means to empower employees. It was important to conduct continuous training (formal as well as informal) followed by application of the knowledge and skills acquired on the job. Training had to be accompanied with up to date technology. Given that the price of sugar was falling and that mechanisation was replacing all manual jobs, there was a need to conduct appropriate training for the workers. Pre and post training was very important so as to evaluate the knowledge of the trainees. More training in the agricultural field should be offered by IVTB training centres. After conducting each training session, evaluation of the same was very important. Wherever possible, overseas training could be envisaged so that employees get an international exposure.

The education and training system had to be revisited and reviewed. Planning in the field of education and training was a must so as to foresee trends. The educational curriculum had to be modified according to the jobs required in various sectors. The provision of all training had to vary according to the demand of the industry to match the requirements of employers. There was a need to reschedule education so that it was geared towards the demand of the labour market. For the grass root level, basic literacy and numeracy courses had to be mounted. Together with emphasis on education and training, creativity should be promoted among employees.

A proper human resource plan and provision of appropriate Human Resource Development in relevant fields were crucial. Our human resources had to be guided according to the needs of the industry.

More jobs need to be created by the Government so as to open up other job prospects when sugar factories would be closing down.

The productivity of organisations relied on its people. As such, the salary of workers in the sector should be attractive so as to encourage existing employees to stay in the industry.

Given that mismatch was prevalent in all sectors, all stakeholders should be involved in a brainstorming session in order to come up with a strategic plan with a view to match training with market demand. Thereafter, the skills required in accordance with the national strategic plan for the development of Mauritius should be spelt out and appropriate training should be provided to prepare people for the realisation of plans. Policy measures should be enforced to attract locals to stay in Mauritius, thus avoiding brain drain from occurring.

QUESTION 15- What can be done to ensure that the local workforce achieves equal or better levels of productivity as compared to international standards?

One respondent was of the view that the level of productivity was satisfactory and thus there was no need to change.

Others have given different opinions namely:

- Proper benchmark with organisations in developed countries was important so as to see how things work overseas. Local organisations had to be made aware of the requirements of international standards and the standards set in Mauritius had to be increased accordingly. Organisations should also provide employees with the necessary infrastructure to perform at an international level. More and more skilled employees should be recruited.
- Financial help had to be given to employees of the sector who were in need. Also, there was a need to provide financial guarantee, assist in mechanisation and lay a basis for an offensive by-products prospect. Mechanisation and the use of new technology was becoming a must in this sector. In order to achieve this target, a huge capital was required. Facilities for mechanisation should be provided and we should go fast with the exploitation of sugar cane by-products such as ethanol.
- There was a need for appropriate and tailor made training catering for the needs of organisations. This could be achieved by conducting a Training Needs Analysis. Training had to be accompanied with a positive change in mentality, attitude and perception of Mauritian employees. The mentality of trade unionists also had to be changed for the better. Specific and continuous training must be provided to employees as it increased the professionalism of workers and was a motivational factor. Besides, up to date training must be offered so as to keep abreast with latest technologies. Training and re-training should be an on-going process and it should promote learning organisations. If need be, training should go together with education.
- Employees should be self-disciplined, good at time management and should espouse a culture of starting work early. They should also be more serious with their job, work harder and reduce their absenteeism. There was a need to make them quality conscious and productivity minded so as to produce excellent goods and services. Employers should communicate the existing labour laws to all employees. Incentives should also be given to employees in terms of attractive salary and conducive work environment.

QUESTION 16- In what ways can the present situation of under-employment (not utilising the full potential of the employees) be tackled?

An employer said that there was no solution for this situation. Another one believed that organisations should simply downsize.

Training was very important. Multi-purpose competencies should be encouraged; local labour laws needed amendments to encourage mobility; wage structure and establishment should be reviewed. Employees working in the Agricultural sector should be trained in other fields such as the hotel industry.

The mentality of people including school leavers needed to be changed. There was too often a tendency for Mauritians to be lazy at work. Mauritian employees needed to be observed strictly so as to know how they were performing their jobs. If employees were performing up to the level, they should be empowered; hence, they would develop a sense of belongingness to the company. Besides if locals become more competitive and productive, the total number of expatriates could be brought down.

A proper human resource planning was important. The services of labour offices should be made easily accessible so as to guide potential employees to choose proper jobs. School leavers should be made aware of the realities in the labour market so that they could specialise in the appropriate domain/field of study. These services should go towards the people instead of people going towards the services. Regional centres and prevocational establishments could be set up to help employees.

A special national government-run agency should be set up to stop favouritism, especially in the private sector.

Proper feasibility statements should be carried out so as to diversify and invest in new sectors of operation. Investments and the setting up of enterprises should be encouraged.

Some said that by doing proper recruitment of employees and by providing opportunities for better jobs, this situation could be tackled.

Some believed that self employment was the remedy for under-employment. Job seekers should be given the appropriate incentives to become self employed. SEHDA should come up with more schemes and projects for those who wanted to set up their own business.

Existing employees and potential entrepreneurs should be made aware of existing skills in the market. This would facilitate expansion and creation of enterprises. Work conditions should also be improved.

There should be a tripartite synergy between employees, management and unions to ensure flexibility in the system which was at present so rigid where the potential of some employees were not fully exploited.

QUESTION 17

a) Is there a performance appraisal system in your organisation?

70.5 percent of respondents claimed that they did not have a performance appraisal system in their organisation as compared to 29.5 percent who did have such a system.

b) If yes, what method(s) do you use to appraise your employees?

The following responses were captured for this question:

- gifts are offered to employees;
- after evaluating the employees' performance and productivity, bonuses were given to them. In some organisations, bonuses were also based on the daily work rate, absenteeism and punctuality. Financial compensation based on piece rate was also given at times;
- direct interviews were conducted with employees so as to follow up their work;
- one company said that "star method" was used in their workplace based on the (situation, action taken, result and then compensation);
- a report from the supervising officer on the performance of the employee was requested;
- traditional public service confidential report coupled with some subjective and objective criteria were used;
- at the beginning of the year, the employee and his supervisor agreed on a Forward Job Plan for the year following which the employee was appraised twice a year. Even if the system is fully objective and open, a constant monitoring was also done;
- Performance management system was used where incentive/schemes were offered to employees depending on their personal competencies and weaknesses;
- One employer mentioned that they were working on a performance appraisal scheme which would be simplified and more adapted to their needs.

QUESTION 18- Do you have a career plan for all your employees once they are recruited by your organisation? If yes, give a brief explanation

53 percent of employers out of which 41 percent were from the sugar cane industry, mentioned that they did not have a career plan for their employees. 5 percent of respondents, all of whom were from the sugarcane industry said that for lower levels, the career plan did not really exist but for higher posts, possibilities existed as the matter was managed through the government and discussed at the board level. One employer from the potato industry specified that in his company, a career plan existed and he gave the example of a labourer who could become a driver, overseer or messenger. Another 2 respondents from the cold storage and “other flowers” industries said that all employees had to follow the existing ladder and there could be possibilities for promotion depending on opportunities that arose. In the case of ‘research and experimental development on Natural Sciences and Engineering’ (NSE) industry, the employer said that each and every new employee was made aware of the criteria that had to be met and the avenues of promotion that existed.

QUESTION 19- Assuming there is a crisis situation where your organisation has to close down, do you have a program/scheme to redeploy your workers?

40 percent of respondents, of which 41 percent were from the sugarcane industry, said that they did not have any program/scheme to redeploy their workers. Three employers of the sugarcane industry stated that their organisations, under strict supervision of the Sugar Authority, had already gone through a Voluntary Retirement Scheme in 2002 for the workers and staff and that in case they had to close down, it would have to be managed accordingly. Another 10 percent of employers said that according to the Labour Act, an allowance/compensation in the form of VRS would have to be given to the employees, in consultation with management. An employer from the Research and experimental development on natural sciences and engineering industry was of the view that since all his employees had been trained in one way or another, they should be able to find another job. In the tea industry, the respondents believed that in case there was a crisis situation, the employees would be transferred to the Tourism sector for *La route du thé*.

QUESTION 20- What is/are the main reason(s) for employing expatriates?

a. Lack of locals trained in related field

71.4 percent of those surveyed mentioned that lack of locals trained in related field was the main reason for employing expatriates.

b. Lack of qualified locals

75 percent also believed that the main reason behind employing expatriates is the lack of qualified locals.

c. High labour cost while recruiting locals

77.8 percent of employees said that due to high labour cost while recruiting locals, they had to employ expatriates.

d. Unwillingness for locals to work odd hours/shift system

80 percent of respondents reported that because of the unwillingness of locals to work odd hours/shift system, they had to recruit expatriates

e. Unwillingness for locals to work in your sector

Employers who agreed with this statement represented 71.4 percent of total respondents.

QUESTION 21-Does your organisation have an HR/Personal Management department?

Those who had an HR/Personal Management Department accounted for 64.9 percent of total respondents.

QUESTION 22- How many expatriates do you have/planning to have in your organisation according to their highest educational level?

The survey results showed that there were no expatriates employed in the year 2004-05 but that in the year 2005-06, one employer who was in the 'Research and experimental development on natural sciences and Engineering' industry was planning to have 2 expatriates having a postgraduate degree in a related field.

QUESTION 23- State the number of unfilled vacancies (up to June 2005) in your organisation due to unavailability of people with the right profile.

Three employers of the sugar cane industry said that due to the international context, they have no choice but to downsize and so the future of their sector is uncertain. The views of other respondents were captured as follows:

Table 4(u): Number of unfilled vacancies due to lack of people with the right profile

Job Title	No. of Unfilled Vacancies	Minimum qualifications required
Sugar cane		
Draughtsmen	2	School Certificate, Computer, Design
Female Labourers	2	None
Tobacco		
Helper	2	Primary
Anthurium		
Production officer in poultry	2	Degree
Farm attendant	2	School Certificate
Other flowers		
Veterinary Officer	2	B.Sc. (Veterinary Science)

Table 4(u) shows that it was difficult to find employees who had not only tertiary qualifications but also those with lower educational backgrounds such as helpers and female labourers.

Conclusion

The Agricultural sector is presently going through a bad phase, be it in Mauritius or on the international front where the demand for agricultural products and growth rate of agricultural production has slowed and is expected to decline even more in the coming years.

As far as the sugar sector is concerned, Mauritius has no option but to decrease its cost of production that is relatively high thereby boosting its level of competitiveness on the world market. In other words, to remain competitive, Mauritius is bound to undertake a major reform in the sugar industry. However with the eventual fall in the price of sugar by 36 percent in 2009-2010, Mauritius will have to diversify and think about alternate ways and means to promote the Agricultural sector. Emphasis should be laid on the non-sugar sector and we should market our local products on the international market. Table 4(v) shows the estimated number of employees required in the Agricultural sector for the year 2006-2008.

Recommendations

Given the low educational attainment of employees in the Agricultural sector, it is imperative to upgrade the literacy and numeracy skills of these employees, especially in the sugar sector where the number of employees is expected to decrease.

With fewer young people showing interest in the agricultural field, the Mauritian youths need to be sensitised about the importance of agriculture. One way to achieve this objective is to introduce agriculture in schools, colleges and training institutions.

Strategies should be devised to increase the value added of the sugar industry by optimising the use of bagasse, molasses and production of special sugar. Besides, given the increasing use of ethanol in vehicles around the world, possibilities to produce ethanol in Mauritius on a large scale should be seriously envisaged. The financing of the sugar cess has to be reviewed so as to meet the demand of the industry and the stakeholders. Since only 6 sugar estates will operate by 2008, it means that the present workers of the sugar factories will need to be reskilled so as to remain employable. As the Seafood Hub will require additional employees with low educational profile, employees who will leave the sugar sector can be redirected towards the Seafood industry.

Work in the Agricultural sector, especially the agro-industry needs to be professionalised so that it becomes in line with the mechanization policy of the Government. In fact, regional co-operation should be strengthened and be made an integral part of the diversification strategy and expansion of

our agro-industrial base. For instance the Government can introduce new schemes to set up nurseries to increase the production of flowers, fruits and vegetables. Besides, a body should be created to promote production of high value added agricultural products for exports. In this context, planters can be accompanied to conduct market research for their products and be taught new packaging techniques so as to enhance the value to their products. As there is an existing pattern for consumption of fresh milk, the setting up of a dairy village, which will lead to the creation of more jobs, can be considered. With an increasing number of people going back towards "Green products", the culture and industrial treatment of plants can be explored so as to be used in the pharmaceutical, culinary and cosmetic industries.

There is a need to reinforce our capacity for Research and Development in the Agricultural sector as a whole and restructure the existing organisms. As regards the non-sugar sector, state of the art technologies have to be introduced for all operators with particular focus on small ones. The small planters have to be productivity-minded and quality-cultured. As such, wherever possible, the use of biotechnology should be encouraged and for planters, they can be sensitised about the techniques to implement hydroponics. Besides, there should be an appropriate Unit to attend to the day to day queries of planters and inform them about the appropriate strategies to grow.

In the same breath, agricultural workers including vegetable planters can be given appropriate assistance, especially when they are hit by natural calamities. Also, auction sale markets could be set up in different regions of Mauritius so that the planters can more easily sell their products. The Government could help agricultural workers by providing fertilizers and herbicides at concessionary prices. Small planters can also be helped by investing more on irrigation and derocking projects.

In parallel with Mauritius, the Agricultural sector of Rodrigues cannot be left behind. Thus the agricultural potential of Rodrigues' has to be optimised so as to open a window of opportunities for the inhabitants.

LIST OF TRAINING PROGRAMMES

ACCA
Additional training by SMIDO
Advanced Scientific Research
Animal production
Appropriate training to use up-to-date agricultural machines such as for irrigation purposes
Awareness of the various challenges that the economy is facing
Bell operation
Biotechnology
Biotechnology and co-product valorisation
Business and management consultancy
Cattle rearing
Communication
Crop Production
Crop Protection
Draughtsmanship
Entrepreneurship
Existing labour laws
Finance
Gardening
Generic skills in flower industry
Health and Safety
Creativity
Institute of Chartered Secretaries and Administrators (ICSA)
Information Technology (IT)
Land surveying
Leadership
Literacy, numeracy and ICT skills for lower levels
Marketing
More IVTB training such as NTC 2
Operations
Packing of flowers
Poultry processing
Project Management
Public relations
Quality and productivity
Secretarial
Surveying
Vegetable cultivation
Veterinary services

Table 4 (v): Estimated number of employees in the Agricultural Sector

	Classification of employees	06/07	07/08
A	<i>Legislators & Senior Officials & Managers</i>		
1	General Manager/Managing Director/Director	203	191
2	Factory Manager	14	13
3	Field Manager	42	39
4	Head of Department/Department Manager	35	33
5	Manager, Assistant	7	7
6	Managing Supervisor in Agriculture	28	26
7	Operations Manager	7	7
8	Production Manager, Assistant	21	20
9	Workshop Manager, Assistant	14	13
10	Deputy Director	7	7
11	Multiculture Manager	7	7
12	Retail Manager	7	7
13	First Store Manager	7	7
14	Area Manager	21	20
15	Group Agronomist	7	7
16	Garage Manager	7	7
17	Group IT & ICT Manager	14	13
18	Section Manager	14	13
19	Livestock	14	13
20	Assistant Managers	42	39
21	HR Managers	7	7
22	System Administrator	7	7
23	Deputy General Manager	7	7
	Total	538	507
B	<i>Professionals</i>		
1	Accountant	63	60
2	Administrative Professional	36	34
3	Engineer	36	34
4	Human Resource Consultant	9	9
5	Internal Controller	18	17
6	Personnel Officer	18	17
7	Superintendent	45	43
8	Principal Research Scientist	27	26
9	Office Superintendent	9	9
10	Assistant Agronomist	9	9

11	Section Managers	54	51
12	Stores Superintendent	18	17
13	Principal Research	36	34
14	Officer Superintendent	9	9
15	Transport Organiser	9	9
16	Assistant Research Scientist	235	222
17	Bio-Technologist	9	9
18	Field Superintendent	9	9
19	Principal Biometrician	9	9
20	Specific Liaison Officer	9	9
21	Research Scientist	407	384
	Total	1077	1014
C	<i>Technicians And Associate Professionals</i>		
1	Assistant Accountant/Finance Officer	36	33
2	Executive Officer, Assistant	77	73
3	Field Officer	231	218
4	Health And Safety Officer	6	6
5	Associate Professionals	59	56
6	Sales And Marketing Officer	83	78
7	Store Officer, Assistant	30	28
8	Higher Executive Officer	24	22
9	Transport Organiser	6	6
10	Assistant Research Scientist	154	145
11	Senior Finance Officer	6	6
12	Computer Executives	6	6
13	Factory Assistants	36	33
14	Repairs And Maintenance	12	11
15	Economist/Senior Economists	6	6
16	Principal Extension Officer	18	17
17	Logistic Officer	12	11
18	Operation Assistant	12	11
19	Workshop Assistant	47	45
20	Agricultural Coordinator	30	28
21	Station Lab Manager	89	83
22	Senior Extension Officer	107	100
23	Senior Extension Assistant	60	56
24	Deputy Director	30	28

25	Senior Research Assistant	30	28
26	Skill Tissue Culture Technicians	24	22
27	Hardening Units Technicians	12	11
28	Garage Assistants	24	22
29	Irrigation And Agro-Technical Assistant	6	6
30	Planters Advisors And Assistants	12	11
31	Bagging Plant Supervisor	6	6
32	Electrical Flash Automation Officer	6	6
	Total	1291	1216
D	<i>Clerical Workers</i>		
1	Accounts Clerk	146	137
2	Cashier	27	26
3	Clerical Officer/Clerk, Assistant	164	154
4	Confidential Secretary	91	86
5	Operation Clerk	9	9
6	Purchasing Officer	27	26
7	Receptionist/Telephonist	82	77
8	Salesman	9	9
9	Secretary	45	43
10	Timekeeper	36	34
11	Word Processing Operator	309	291
12	Data Processing Assistant	18	17
13	Assistant Time Keeper	9	9
14	Clerk-Word Processing Operator	246	231
15	Administrative Officer(Fields)	18	17
16	Weighers	45	43
17	Designer	9	9
	Total	1292	1217
E	<i>Service, Shop And Market Sales Workers</i>		
1	Cook	13	13
2	Gardener	1049	988
3	Saleswoman	27	25
4	Sundry-Ecole Maternelle	13	13
5	Watchman	188	177
	Total	1292	1217

F	<i>Supervisors, Foremen And Sirdars</i>		
1	Foreman	529	499
2	Gangman	1059	997
3	Overseer	11908	11216
4	Supervisor/Farm	529	499
5	Sirdar	529	499
6	Field Assistants	529	499
	Total	15084	14208
G	<i>Craft And Related Trades Workers</i>		
1	Carpenter	42	40
2	Electrician, Assistant	57	53
3	Fitter	42	40
4	Irrigation Pipe Adjuster	156	147
5	Mason	28	27
6	Mechanic/Automechanic	652	614
7	Metal Worker	28	27
8	Painter	85	80
9	Pipe Fitter	14	13
10	Plumber	28	27
11	Turner	156	147
12	Welder	14	13
13	Handy Worker	142	133
14	Boiler Attendant	28	27
15	Lab Attendant	142	133
16	Rigger	28	27
17	Evaporator Attendant	28	27
18	Irrigation Pump Operator	42	40
	Total	1714	1614
H	<i>Plant & Machine Operators & Assemblers</i>		
1	Bulldozer Operator	53	50
2	Driver	529	498
3	Driver/Helper	26	25
4	Driver/Lorry	251	237
5	Driver/Messenger	13	12
6	Driver/Tractor	318	299
7	Driver/Van	106	100
8	Factory Operator	26	25
9	Operators - Excavator	26	25

10	Pump Operator	40	37
11	Tractor Operator	966	910
12	Driver Derrick Crane	622	586
	Total	2977	2804
I	<i>Elementary Occupations</i>		
1	Assistant General Worker	8	8
2	Attendant/Lab	50	47
3	Attendant/Lorry	17	16
4	Attendant/Office	175	164
5	Attendant/Store	33	31
6	Bell Loader Driver	116	110
7	Cane Workers/Thrashing	17	16
8	Cleaner	42	39
9	Farming	42	39
10	Field Labourer	6494	6117
11	General Worker	1098	1034
12	Helper - Excavator	532	501
13	Helper/Lorry	25	23
14	Household Worker	17	16
15	Labourer	1131	1065
16	Messenger	75	70
17	Other Non Agricultural Worker	67	63
18	Packers	75	70
19	Storeman	17	16
20	Tyreman	33	31
21	Unskilled Worker	42	39
22	Watchman	266	251
23	Watchman/Night	42	39
24	Bell Helpers	25	23
25	Fruit Transformation	191	180
26	Bagger	33	31
27	Domestic Servant-Hospital Attendant	17	16
28	Male Worker, Night Soil Worker	17	16
29	Gardener/Nurseryman	8	8
30	Stockman	166	157
31	Sprayerman	50	47
	Total	10918	10284