Evaluation of Performance of the Mysore Sugar Company Limited

Department of Public Enterprises

Executive Summary

Karnataka State ranks third in production and fourth in respect of area under sugarcane with fairly balanced spread of sugar factories in southern and northern parts where large tracts of land are put under sugarcane cultivation, especially in the irrigation command areas with assured irrigation facilities. As in the case of rest of the country, Karnataka also has been witnessing fluctuating trends in area, production and productivity. The State presents two segments of sugar industry viz., (i) Khandsari & Jaggery, & (ii) Sugar production. There are 68 sugar factories across the State which can again be classified into (i) State owned (3 units) (ii) Co-operative sector (16 units), & (iii) Private companies (49 units). There is predominance of Private Sugar Companies in the State which take a major share of sugarcane production. As in the case of the rest of the country, sugar industry in Karnataka also is facing with unpredictability due to a number of reasons including uncertainties in sugarcane production on account of weather and rainfall conditions.

The Mysore Sugar Company Ltd., (MYSUGAR), one of the oldest sugar companies established during 1933 is located in Mandya town in Karnataka State. The company was doing well for over half a century since its inception and has made significant contribution to the production of sugar. However, in recent years, its performance is affected by a number of problems with mounting losses and its financial standing is eroded. The Government of Karnataka intended to study the performance of the company by an external agency and take short and long term measures to enable the company to regain its past status. The Department of Public Enterprises and Karnataka Evaluation Authority (GoK) entrusted the task of carrying out the study to M/s. Indian Resources Information & Management Technologies Ltd., (IN-RIMT).

The main objective of the evaluation is to study the performance of the Company, measures undertaken to rehabilitate/ modernise the Company and determine the steps required to rehabilitate the Company.

MYSUGAR: The production capacities of the company include ‘A’ Mill and ’B’ Mill with combined installed capacity of 5000 TCD. It also has a distillery unit with an installed capacity of 36 KLD and also a multi-fuel Co-generation plant with a capacity of 30 MW is in the process of being commissioned. Of these two mills, ‘B’ Mill was installed 80 years ago while the other (‘A’ Mill)

was installed during the seventies (40 years). Both the Mills have outlived their utility and their productivity has declined due to snags that are resulting in frequent break-downs, necessitating frequent repairs. It is operating only one Mill (‘B’ Mill) at 3000 TCD and the other Mill (‘A’ Mill) has stopped working for the past 7 years. Presently, rehabilitation / modernization of ‘A’ Mill is under progress and under the rehabilitation plan, the designed capacity of ‘A’ Mill is being enhanced to 5000 TCD. This would increase overall volume of cane handling to 7500 TCD. The analysis of the data with respect to cane crushing and cane supplied by cane growers reveals that, the total quantity crushed is much lower than the quantity of total supply.

A **Distillery Unit** is functioning as an adjunct to the Mill using molasses for production of Rectified Spirit (RS) and Indian Made Foreign Liquor (IMFL). The designed capacity of this unit is 36 kl of RS/IMFL. The distillery is not functioning regularly on account of non availability of steam and electricity from the sugar unit.

Power: The total capacity of all the motors including those for utilities but excluding ‘A’ Mill assembly and ‘A’ Mill accessories is 10145 HP or say 10,000 HP and ‘A’ mill drive and ‘A’ mill connected equipments is to the extent of 7713 HP, totaling to 17713 HP equivalent to 13275 KW or 13.27 MW. The internal consumption of the factory and utilities is around 9.00 MW, which appears to be on the higher side. Voltage fluctuation at the point of generating and power factor variation and few other problems at the power house was observed; there is possibility of a 15-20 % overrating of motor / power consumption.

A **Co-generation plant** with a cost of Rs 96 Crores with a designed capacity of 30 MW was installed and got ready for commissioning in the year 2007. This plant has 2 boilers with a steam generating capacity of 80 tons/ hr at a pressure of 66 kg/ cm^2. The 30 MW Co-gen plant is lying idle for the past 8 years. From the time of installation in 2007, the Co-gen plant has worked only for 4 hours. The Co-gen plant can become operational to its full capacity only when the factory crushes cane at 5000 TCD or 208.30 tons/ hr, which is possible only when Mill ‘A’ is commissioned and runs with 100% capacity. In the ‘B’ Mill alone, during the year 2014-15, the crushing was just around 1500/1600 TCD, including stoppages.

Boiling house: As for the capacity of the different stations in the Boiling house, it is found that the units have ample capacities to crush 5000+ TCD, except the fact that all of them need major overhauling, repairs, maintenance and re-organization. Virtually, the entire equipment and machinery in the Boiling house needs total overhauling if the expected rate of crushing of 5000 TCD is to be achieved. Major repairs to Pans, Condensers, Crystallizer Centrifuges etc., need to be carried out in the off-season.

As per information, the B. Masscuite and C. Masscuite % cane has been on the high side, clearly indicating the poor quality of cane being crushed in the factory. A study of the comparative statement of the final Manufacturing Report for the past 8 years indicates that, the down-time is too much on the high side to the extent ranging from 27.7% to 78.7%. Capacity utilization of Plant & Machinery is less than 40% based on the installed capacity of 5000 TCD, which the company has never achieved. Technical efficiency, whether in the Engineering or in Manufacturing side is far from satisfactory and does not come anywhere near the industry standards. The total losses are very much on the higher side and almost 0.5% higher than normal mean. This is attributed to the very frequent break-downs resulting in fall of juice percentage and reduction in purity affecting sugar recovery. Also, crushing of dry/ stale cane almost after every major break-down is affecting the overall recovery of sugar. It is observed that there is considerable delay in procurement of essential spares. A study of each category of items of stores and spares stocked and the period from which they are lying unused / unissued, including visual assessment indicated that at least 3 blocks out of 5 in the stores are stocked with items which have remained unused for the past 10 years and some lying around for 15-20 years.

A comparative study of the performance of the nearby sugar factories Sri. Chamundeswari Sugars Ltd (SCSL), Mandya and Pandavapura Sahakara Sakkare Karkhane Ltd (PSSKL), Pandavapura with Mysore Sugar Company Ltd., (MYSUGAR), indicated that PSSKL has a capacity to crush 3500 TCD; SCSL - 4000 TCD and MYSUGAR - 5000 TCD (In reality, MYSUGAR is operating only one mill of 3000 TCD and the other mill of 5000 TCD is under renovation).The average Cushing days of the three Sugar factories during the last 4 years are: PSSKL-180 days; SCSL- 200 days and MYSUGAR- 198 days. The average cane crushed during the last four seasons varies (PSSKL: 1,30,000 MT to 3,50,000 MT, SCSL: 4,50,000 MT to 6,00,000 MT & MYSUGAR: 2,21,000 MT to 4,11,000 MT) The capacity utilization are: PSSKL: around 70%, SCSL: around 94% & MYSUGAR: around 35%.The loss of sugar in bagasse, loss of sugar in press cake, loss of sugar in molasses, unknown losses and total losses in PSSKL varies from 2.68 to 2.73; in SCSL it varies from 1.94 to 2.00. In case of MYSUGAR, the losses varies from 2.44 to 2.81. The total losses for a factory working without breakdowns and with optimum efficiency, normally, ranges from 1.9% to 2.2%. Compared to these figure the total losses of PSSKL & MYSUGAR have been very much on the high side and if the total losses are more than 0.5% compared to normal, the sugar loss will be 5 kgs of sugar for every ton of cane crushed or 5000 quintals for every lakh tones cane crushing . The time lag between harvesting and crushing is the lowest in SCSL. It is just around 20 hours because of which the recovery is much higher compared to either PSSKL or MYSUGAR. The time lag at PSSKL is about 24 hours. Compared to these two factories, the time lag of MYSUGAR is the highest ranging from 60-90 hours resulting in the factory crushing dry cane/ stale cane which is the reason for low recovery of cane and increase in the losses due to poor milling, boiling house losses, undetermined and total losses. Steam % cane is the lowest around 42 to 46% in SCSL. At PSSKL, it is around 55% and at MYSUGAR, it is around 60 to 65%. Final Molasses purity at SCSL is around 30-31 which is well within the normal limits. At PSSKL, it ranges from 34 to 36. At MYSUGAR also, the purity ranges from 32 to 36. A study of machinery also showed similar variations. In case of MYSUGAR, there are many items which have been in use for a long time and many new items of machinery and equipments have been added. At many places, there is duplication of items. A study of the machinery schedule indicates that the plant can crush 5000 TCD in the existing plant and machinery subject to their commissioning the ‘A’ Mill. Commissioning new set of evaporator bodies, rectification of old evaporator bodies, a set of floating bodies to avoid frequent periodical cleaning, as is being done in SCSL, total rehabilitation and overhauling of plant and machinery can make this plant work well. A total overhauling of machinery along with motivation / skill development is necessary. The cane department has to work with more efficiency specially in reducing the time lag between harvesting and crushing.

Sugarcane supply: The area under sugarcane in the district is 38,649 ha. Of this area, the Company is planning to get sugarcane from 273 villages covering an area of 12,238 acres or 4935 ha. for the year 2014-2015. The production of sugarcane has been normal ranging between acceptable parameters over the past many years except from 2001 to 2004 and 2008-2009 owing to drought conditions and scarcity of rainfall and consequent dearth of water in the KRS reservoir. So, scarcity of sugarcane being responsible for the sickness can safely be ruled out.

The sugarcane farmers by and large are growing Co-62175 variety for its high yielding qualities. A few of the farmers are growing Co-86032 and M-1. The (VCF-517) variety, is slowly getting popular and area covered has begun to gradually increase. This variety has better yield and higher recovery of sugar and highly suitable to this tract. The productivity has ranged from 40 tons to 60 tons per acre with an average of 45 tons per acre. The farmer’s major grouse is that, there is no system in place either from the Sugar factory or the Department of Agriculture or the University of Agricultural Sciences for the timely supply of treated sugarcane setts to the farmers and no concerted effort to bring in or evolve higher yielding sugarcane varieties with better recovery percentage.. The farmers say that, the supply of bio fertilizers reaches them very late. Untimely supply of chemical fertilizers and the spiraling prices are causing severe hardship to them. The labour and transport costs have become prohibitive and are driving the farmers away from agriculture as it is no longer a viable livelihood proposition. Cost of harvesting and transporting of the cut cane to the factory ranges from Rs. 800 to 1000 per ton. Finance in the form of loans is another stumbling block. Though crop loans are available at 7% interest, it is to be repaid within 12 months time. The farmers are unable to repay in time as delayed payment from the factory is a very common occurrence. The farmers are levied interest of 12% for delayed repayment of loans by the banks. This makes finance from banks an unviable proposition.

Physical Performance of the Company: Information available from published reports reveals that the Company has been operating under loss. During seven years under review, the physical turnover in terms of cane crushed and sugar produced has shown fluctuating trends. The Company has not maintained consistency in its operations with annual variation in crushing of cane, recovery percentage and production of sugar and other by-products. One of the reasons quoted by the Company is non-availability of sugarcane and another is frequent break down of machinery and loss of crushing hours in repairs/ replacements.

A study of trends in sugar production from cane indicates that the recovery percentage had ranged between 8-9%. It was seen that the Company had commenced crushing operations only from August/ October in four out of seven years.. An analysis of trends shows that mechanical and electrical issues followed by non availability of cane were responsible for the downtime loss. On an average 11 hours / day were lost (around 45% of 24 hours / day). Stoppage of crushing on account of mechanical and electrical problems averaged at 32.5% (almost a third).

Production of bagasse ranged between 29% and 32.5% of sugarcane crushed during the period under review, while, the productivity of molasses ranged between 4.4% and 6.0% during the same period with annual variation. The other by-products include Fibre (yield between 12.% to 15%) and filter cake (2.9 to 3%). Molasses percentage at 4.4% to 6.0% is on the higher side. While these two joint products add to the Company's revenue generation, bagasse reduces cost of fuel.

It was seen that the Company had manufactured Rectified Spirit and Alcohol till 2012-13 and stopped in 2013-14 and restarted production of Rectified Spirit in 2014-15.

Financial status: A study of Company's financial performance during the seven year period under review (2007-08 to 2013-14) indicates that (i) Annual turnover in financial terms has shown variation on year-to-year basis, corresponding to production of sugar and other joint products and other incomes, (ii) Cost of production has shown consistent upward trends, (iii) Component wise cost shows that there has been increase in overhead costs (salaries and other administrative expenses), (iv) Repairs and replacements have shot up over the years, (v) Financial cost/ overhead in terms of interest and debt-servicing has shown substantial rise, (vi) Liabilities on account of borrowings has shown steep rise, and (vii) With negative profit in successive years, accumulated loss has risen significantly.

The factors affecting Company's performance are: (i) Cost of sugarcane has risen significantly, (ii) Average price of realization for sugar and other joint products has remained more or less same with marginal rise, (iii) Conversion cost has gone up, (iv) Inefficiencies in operations have affected productivity viz., (a) older machineries, (b) lower staff productivity, (c) non-availability of sugarcane, (d) frequent break down and loss of crushing hours, (e) Rising overheads, (f) no additional product lines like distillery and Co-gen which can add to the revenue, and (g) financial liability (Debt servicing).

Return per rupee spent on staff has shown fluctuations on a year-to-year basis. During 2008-09 and 2009-10, the ratio of staff cost vis-a- vis income was the lowest and almost 50% of income was spent on salaries and wages only. The loss making trends of the Company in all the seven years under review has sent a clear message that the cost of operations has always been much higher than revenue generation. This has led to accumulated losses.

Over the years cost of sugarcane has risen twice from the base year (2006-07) as a result of which per quintal cost of sugar production has also made continuous change. While sugar price has remained more or less same or has slightly increased, cost of production of sugar which was Rs.13525/- per ton during 2006-07 had gone up to Rs. 22477/- per ton during 2012-13.

The Company has huge debt burden on account of borrowing - both long term and short term in nature. This has added to the overall cost and also viability is eroded. The trends in the Company's interest burden reflected clearly the reasons for sliding financial status of the company. Financial overhead has been rising. For every ton of sugar produced, the debt service burden rose from Rs.1498/- in 2006-07 to Rs. 4646/- in 2012-13.The interest liability on every kilogram of sugar produced varied between years and depending on volume. Generally, it ranged from Rs. 4.5/- to Rs 5.5/- per kg.

A study of trends in Operating Results (OR) of the Company during the years under reference shows some encouraging picture. On two occasions, there was plus margin and on another one, the negative margin was very small. However, higher negative margins were seen in two years. If some of the overheads are ignored, the actual margins could be favourable and manageable for the company.

Observations &Findings: (i) Reduction in cane area is not solely responsible for the sickness of the Company. Draught for two consecutive years has affected the cane availability to the factory during the seasons 2008-09 and 2009-10. (ii) Old / aging equipments which are not being maintained well have contributed to the poor performance of the Company. Higher manpower coupled with inefficiency has affected the Company's performance / profits. (iii) No rehabilitation measures have been undertaken systematically / seriously by the Company. This is apparent from the existing condition of the machinery and their maintenance. (iv)There have been attempts to improve the crushing capacity of the mills by modernizing one set of mill called "A" Mill which was installed in the year 1975-76. With the modernization of "A" Mill, a new bagasse handling system has also been installed. (v) One of the main problems in the factory is in the cane transport system. Unlike the other factories in the region, which crush the harvested cane within 24 hours from the time of harvesting, Mysore Sugar Company takes more than 72 to 96 hours i.e., the time lag between harvesting and crushing is 72 to 96 hours. This inordinate delay in the transport of cane and crushing is responsible for poor recovery percent cane.

Suggestions for Revival:

Operational / Technical: The Company's future prospects depends very much on successful running of the factory without stoppages; commissioning of the Co-gen plant as early as possible and export maximum power to the grid (this will be the main source of revenue to the company); bringing down the power consumption within the factory which at present is very high; improving capacity utilization, bringing down losses in bagasse, molasses, filter cake, unknown losses and thereby the total losses; improving technical performance and efficiencies to reduce losses and improve recovery percent cane; running the distillery round the year by consuming the entire molasses produced by the factory and if necessary buying from other factories; improving distillery efficiency by modernizing / changing the plant and machinery which at present, is not in good shape. Also total rehabilitation / modernization work should be undertaken. Staff in excess may be controlled. Computerization of sugarcane procurement till sugarcane payment release may be implemented and closely monitored to streamline the process. Overhauling of plant and machinery during off-season has to be taken care of meticulously, so that, the entire plant and machinery is ready in all respects for the ensuing crushing season and the plant works without breakdown. The nature of maintenance should have to be preventive maintenance and not break-down maintenance, All the necessary spare parts required for off-season overhauling and maintenance must be procured before close of the season or immediately after the season is over, so that, there is no delay in overhauling and maintenance for want of spares. Steam consumption in the factory is very much on the higher side. As for stores and spares, the present huge quantities of assorted spares and store items should be identified for their relevance and necessity of retaining / stocking them. Dispensing with some of them would reduce both cost of material and cost of holding.

Sugarcane supply: The company may look into the feasibility of bifurcation of the Cane Development Department into two entities, one for cane procurement and the other for cane development and the latter should concentrate on selection of suitable sugarcane varieties and supplying quality and treated seed materials to the growers. Feasibility of introducing newer varieties in phases should be explored. The company should generate adequate resources for payment of advance to the cane producers at the time of supplying of cane to the factory to meet their harvesting costs and also clear the final payment for the cane supplied within a fortnight of receiving the cane (as warranted by the Karnataka Sugarcane [Regulation of Purchase & Supply] Act 2013) after deducting the advances paid. Making payment directly to the cane growers bank account may be explored. It is felt that, the Government may bring out an amendment to the Karnataka Sugarcane [Regulation of Purchase & Supply] Act 2013 to the effect that payment to farmers could be extended up to a maximum of 45 days after supply of cane to the factory, instead of the 15 days period now provided. The Government of Karnataka may consider providing some financial subsidy / relief per ton of sugarcane purchased (as is being done in the States of Maharashtra and Tamil Nadu), till such time MYSUGAR improves its working (commence co-gen plant) and earn additional income.

Financial: The concern that warrants urgent attention is enhancing efficiencies of the three important M’s viz., Men, Material & Machines. The first, i.e., Men can be addressed through a special drive for enhancing their productivity. There are a number of modern and latest techniques and tools for (i) employee productivity, (ii) employee incentivisation and motivation, (iii) policies aimed at recruitment, training and skill upgradation, (iv) following Carrot and Stick policy of rewarding and reprimanding, and (v) revisiting the present policy of retaining personnel on contractual basis. The Company has accumulated losses to the tune of about Rs. 464.22 Crores on which interest liability is rising continuously since repayment of loan is not possible in view of negative cash flow. A strong finance department is needed to address the number of issues relating to cash flows and money management and for this purpose, a full-fledged Factory Cost Accountant would be necessary. Reduction in the interest liability is of prime importance since substantial amount of money has to go towards this charge. It is desirable to explore negotiations with funding agencies for a one-time-settlement (OTS) of outstanding loan and waiver of part of interest. The Company may seek financial assistance (in the form of interest-free loan) to be used for OTS and meeting operating costs partly, since Working Capital and other financial accommodation from financial institutions involves higher interest burden and the Company would not be in a position to sustain this cost.

Human Resources: The present system of engaging labour through contractors and their payment on period-basis may be reviewed and a new system of payment on output basis may be considered. The Company should revisit this policy and consider at least some important positions to be filled on regular basis so that the employees may feel secured and their outlook may change with improved output. Over-staffed departments should be identified and the Heads of the Departments may be motivated to reduce the number in view of improved technology available.

Observations & Findings

- Reduction in cane area is not solely responsible for the sickness of the Company. Yes, there is a steep reduction in the area under sugarcane from 1,25,000 acres to 25,583 acres as per the background information furnished. Drought for two consecutive years has affected the cane availability to the factory only during the seasons 2008-09 and 2009-10.

- Old / aging equipments which are not being maintained well have contributed to the poor performance of the Company. A study of the condition of the machinery shows that, no rehabilitation measures have been undertaken systematically / seriously by the Company.

- However, there have been attempts to improve the crushing capacity of the **mills by modernizing one set of mill called "A" Mill which was inst**alled in the year 1975-76. The mill has not run to its full capacity so far and is running only for 2 to 3 hours daily with the help of power purchased from the KEB.

  The technical staff avers that, this is only a trial run. With the modernization of **"A" M**ill, a new bagasse handling system has also been installed.

- The plan is to export 18 to 20 MW of power to the grid and balance to be consumed by the factory when the Co-gen plant is fully commissioned. Unfortunately, this Co-gen unit has not been working virtually from the time of installation, except for 4 hours during the initial period. Only one boiler is presently working after a recent thorough overhaul. The second boiler is yet to be commissioned and is undergoing major maintenance.

- No date has yet been fixed for commissioning the second boiler.

- The Company has installed a new set of evaporator bodies supplied by M/s KCP Ltd., and this set is yet to be commissioned because there is not enough juice to commission it. The evaporator has huge capacity to handle a crushing of 5000 TCD. Poor crushing is responsible for the non availability of sufficient juice to commission the evaporator set.

- The Company has procured a new vacuum filter and it is yet to be installed and commissioned.

- It is not possible to determine total capacity of the plant in the absence of details of plant and machinery. The Company has been reporting that the capacity of the plant is 5000 TCD in all the returns which are sent to the various agencies, including the Central Government.

- One of the main problems in the factory is in the cane transport system. Unlike the other factories in the region which crush the harvested cane within 24 hours, MYSUGAR takes more than 72 hours i.e., the time lag between harvesting and crushing is 72 to 96 hours. This inordinate delay in the transport of cane and crushing is responsible for poor recovery percent cane. Most of the time, the factory is crushing stale cane resulting in reduction in recovery percent cane, milling losses, etc,.

- **“Karnataka Sugarcane Regulation of Purchase and Supply” Act 2013 may not be** indicating or specifying the time within which the cane should get crushed, after harvesting but, there is a provision for payment of sugarcane price within a stipulated period. The time-lag has got to be reduced and governed. There are other conditions in the order, which are very important and needs to be followed. (Copy of the order / Act in enclosed vide Annexure 10)

Suggestions For Revival

Operational / Technical:

The problems of the Company in the various branches of the factory have been discussed in the foregoing chapters. Every problem of the Company needs to be tackled on priority, but if only a selective approach is adopted to address the problems, other problems remain unresolved, leading to adverse effect on operational efficiency of the company. However, most important issues to be addressed with immediate steps are:

1. The downtime losses and total losses have been very high resulting in huge losses to the Company, which needs to be addressed immediately.

2. The Company should start its crushing operations in the month of June, preferably by middle of June, every year so that the cultivated sugarcane does not remain unharvested for more than 12 months, and the farmers can have ratoon crop which will be beneficial to the farmers by way reduction of cost of raising the next crop, and to the factory, by way of better sugar recovery percent from cane.

3. Poor /underutilization of the installed capacity of the plant and machinery has resulted in the duration of the season getting unnecessarily extended, culminating in poor or reduced sugar recovery percent. The Company should concentrate on thorough/ major overhauling of plant and machinery immediately, to catch-up with ensuing crushing season.

4. The centrifugal station needs special attention, since it is here that the **Company is losing lot of sugar molasses resulting in increased '*total losses*'**.

5. The major source of revenue to the factory is from its Co-gen plant, which has a capacity to produce 28 MW of power and supply not less than 18-20 MW power to the grid. Even by crushing for 200 days, the Company will be able to earn around Rs. 40 Crores in a season. The Company should prioritize

commencement of Co-gen without any delay since every day of operations would mean loss to the company. Hence efforts should be directed to put Co-gen under productive use to be able to achieve higher income realization. This needs a very concerted effort from the management, including and especially from the Technical Heads and Technical Staff, with the support and involvement of the work force.

6. Every large capacity sugar factory will have a distillery attached to it mainly on account of the fact that, a sugar factory crushing around 7-8 lakh tonnes of cane in a year produces around 28000 to 32000 tonnes of molasses. This quantity is enough to put up a distillery of 30 - 35 kiloliters (kl) of Rectified Spirit (RS) per day and it can be kept running for about 200 days. The revenue so earned will be quite enormous and will augment the funds available for other activities. Since MYSUGAR sends out more molasses than normal, containing high fermentable sugar, it is all the more urgent to run the distillery more efficiently round the year and priority needs to be given to this aspect.
7. Steam consumption in the factory is very much on the higher side, ranging from 60% to 65% against the normal of 50%. The company should target this issue to reduce steam and power consumption, and in turn export more power to the grid.
8. As for stores and spares - the present huge quantities of assorted spares and store items should be identified for their relevance and necessity of retaining / stocking them. Dispensing with some of them would reduce both cost of material and cost of holding. For this purpose, an ABC analysis needs to be attempted.

Sugarcane supply

1. Feasibility of bifurcation of the Cane Development Department of the factory into two entities may be explored; namely - one for cane procurement and the second for cane development. The latter should concentrate on selection of suitable sugar cane varieties, growing sugarcane for supplying quality and treated seed material to the sugarcane growers.

2. The company should generate adequate resources for payment of advance to the cane producers at the time of supplying the cane to the factory to meet their harvesting and transporting costs, and clear the final payment for the cane supplied within a fortnight of receiving the cane [as warranted by the Karnataka Sugarcane (Regulation of Purchase and Supply) Act 2013] after **deducting the advances paid. Making payment directly to the cane grower's** bank accounts may be explored. However, it is felt that the Government may bring out an amendment to the Karnataka Sugarcane (Regulation of Purchase and Supply) Act 2013 to the effect that payment to farmers could be extended upto a maximum of 45 days after supply of cane to the factory, instead of the 15 days period now provided.

3. Proactively involve in the supply of bio pest control measures viz., Trichogramma cards from the Parasite Control Laboratory of the Department of Agriculture. This would considerably reduce the dependence on costly chemical pest control measures.

4. Government of Karnataka may consider providing some financial subsidy/ relief per ton of sugarcane purchased (as is being done by Maharashtra and Tamil Nadu), till such time MYSUGAR improves its working (commence co-gen plant) and earn additional income.

Long Term measures

1. Cultivation of improved high yielding varieties of sugarcane suitable to the area such as VCF-517, M-1, Co62175 in the lands belonging to MYSUGAR for seed material to be distributed to the sugarcane growers at nominal cost to ensure good recovery percentage of sugar.
2. Supply these sugar cane setts after the prescribed treatment to the growers to ensure disease free planting material.
3. Supply fly ash and press mud to the growers at nominal cost to the growers to augment the addition of compost to the sugarcane growing fields.
4. The Agriculture / cane department should explore possibility of introducing early maturing, mid maturing and late maturing varieties of cane so that the recovery percent cane remains constant throughout the

season. Varietal changes, as is done in neighboring factories like Chamundeshwari Sugars, should be considered with the help, guidance and assistance of sugar cane research stations.

5. Computerization of sugarcane procurement process, till the release of payment, may be implemented and closely monitored to streamline the process

Financial

1. The concern that warrants urgent attention is enhancing efficiencies of the thr**ee important M's** *VIZ.*, Men, Material and Machines. The first, i.e., Men can be addressed through a special drive for enhancing their productivity. There are a number of modern and latest techniques and tools for (i) employee productivity, (ii) employee incentivisation and motivation, (iii) policies aimed at recruitment, training and skill up gradation, (iv) following Carrot and Stick policy of rewarding and reprimanding, and (v) revisiting the present policy of retaining personnel on contractual basis.
2. The Company has accumulated losses, and interest liability is rising continuously, since repayment of loan is not possible in view of negative cash flow. A strong finance department is needed to address a number of issues relating to cash flows and money management. The cash flow statements are a must for budgeting, forecasting, budgetary control, without which, it is not possible to achieve economy. A full-fledged Factory Cost Accountant would be necessary for this purpose.
3. Reduction in the interest liability is of prime importance since substantial amount of money has to go towards this charge. Under BIFR, it is desirable to explore negotiations with funding agencies for a one-time-settlement (OTS) of outstanding loan and waiver of part of interest.
4. The Company may seek financial assistance (in the form of interest-free loan) to be used for OTS and meeting operating costs partly, since Working Capital and other financial accommodation from financial institutions involves higher interest burden and the Company would not be in a position to sustain this cost.

Human Resources

1. The present system of engaging labour through contractors and their payment on period-basis may be reviewed and a new system of payment on output basis may be considered.

2. MYSUGAR is presently following a policy of engaging contractual employees even for regular jobs with a view to reducing the cost and this may be working well for the time being. But, this is not a permanent solution. The Company should revisit this policy and consider at least some important positions to be filled on regular basis so that the employees may feel secured and their outlook may change with improved output.

3. Over-staffed departments should be identified and the Heads of the Departments may be motivated to reduce the number in view of improved technology available.

4. Government of Karnataka may consider ensuring a minimum period of working ranging between 3 - 5 years for the Managing Directors so that they can implement the policies and ensure improvement in the working and achieving desired results.