

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

PROGRAMME FOR ANNUAL GENERAL MEETING : 24 OCTOBER 1985

- 8.30- 8.45 Chairman's report
- 8.45- 9.15 George Davidson, Director Manufacturing, Toyota SA:
'Productivity in Industry'
- 9.15- 9.45 Paul Wattam, Mtubatuba: 'Some ideas on the management
of cane cutters for increased productivity and improved
relations'
- 9.45-10.15 Rod Adendorff, Umhlali: 'Productivity on a North Coast farm'
- 10.15-10.45 Tea
- 10.45-11.15 Henry Moore, Mt Edgecombe: 'Worker involvement management'
- 11.15-11.45 Trevor Tedder, Sezela: 'Safety in Agriculture'
- 11.45-12.15 Eric Ardé and Carl Pfothenauer: 'Manpower development in
Agriculture'
- 12.15-12.45 Dick Statham, Tongaat: 'Training in machine management'
- 12.45- 2.15 Lunch
- 2.15- 2.45 Vernon Watson, Renishaw: 'Productivity on a South Coast
estate'
- 2.45- 3.15 Ant Edmonds, Table Mountain: 'Human resources management'
- 3.15- 3.45 Richard Gordon, Empangeni: 'Staff management on a Zululand
farm'
- 3.45- 4.15 Allan Fuggle, Tongaat-Hulett: 'Industrial relations:
employer/employee interaction and related concerns'

SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION

PRODUCTIVITY ON A NORTH COAST FARM

by Rod Adendorff

Farmers often complain that it is impossible to motivate farm labourers. I believe that it is possible to motivate most farm labourers.

Workers are motivated by what they do and not by the pleasant way in which their management treats them. 'What you measure is what you get'. Therefore measure **results** and not actions.

I set about my task as follows:

- removed restrictions
- training
- decision-making
- responsibility
- *remts*

Removal of restrictions

1. Cane knives (individual selection, no limit to quantity).
2. Files (selection of type and as often as needed).
3. Cane smocks (individual selection, as often as needed).
4. Area to cut (cutters select their own area).
5. Start and finish times (non-existent).
6. Method of cut and load (no restriction).

Training

1. Formal training from the Training department.
2. My own in-house training (anything of interest pertaining to the job). *NPK*

Decision-making

1. Get Induna's involved in decision-making.
2. Ask their advice (cutting sequence, ploughouts, varieties, weeding etc).

Rewards

1. Compliments for work well done.
2. Thanks for work beyond duty.
3. Thumbs up (if work going well).
4. Time off (within reason).

Responsibility

1. Induna trusted to use his own judgement.
2. Allow for mistakes and learn from them.
3. All communication via Induna both ways.

RA/HDN
October 1985

RESULTS

COLLISHEEN ESTATE, UMHLALI

Details	1982	1984
Hectares	311,5	311,5
Tons cane cut	17 064	24 381
Total days cutting	215	260
No of cutters per day	17	9
Tons cane m/d cut and stacked	4,7	10,4
Total labour units	21 607	15 221
Total days	311	311
Units per 1 000 tons	4,1	2,0

Labour used	Days	Total units
2 Indunas	311	622
3 Drivers	311	933
1 Clerk	311	311
3 Domestic	311	933
1 Workshop	311	311
2 Workshop Assistants	311	622
1 Police	365	365
1 Hostel cleaner	311	311
9 Cutters	260	2 340
1 Water boy	311	311
2 Conductors	260	520
9 Herbicide/fertilizer	206	1 854 (Jul-Feb)
6 Spares	311	1 866
21 Togat	180	3 922 (Aug-Feb)
Total	-	15 221

RA/HDN
October 1985

**SOME IDEAS ON THE MANAGEMENT OF CANE CUTTERS FOR
INCREASED PRODUCTIVITY AND IMPROVED RELATIONS**

by Paul Wattam, Umfolozi

INTRODUCTION

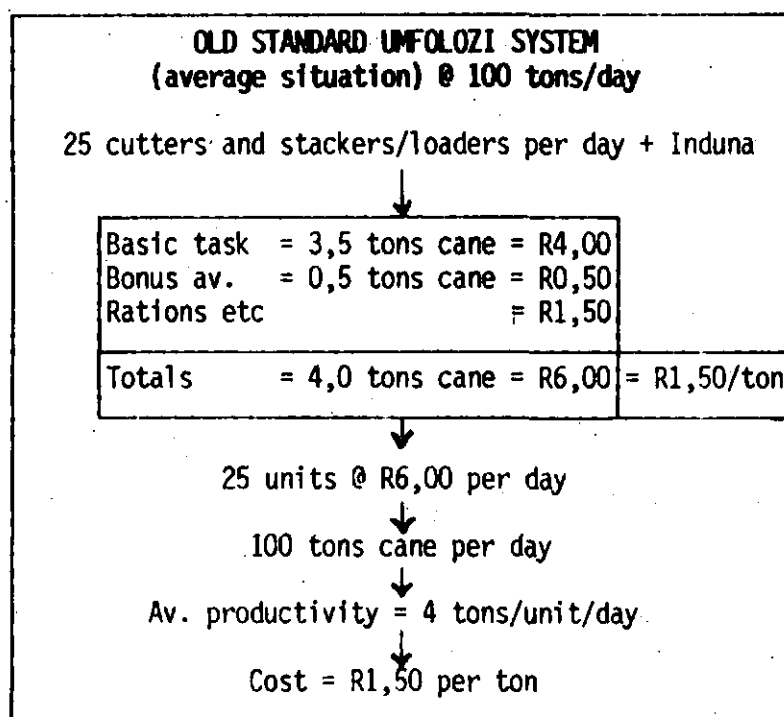
With rapidly changing times and increasing labour costs, motivation for increased productivity, at the same time meeting the needs and aspirations of the farm labour force, is the dilemma we face at Umfolozi.

The inherent system of labour management at Umfolozi is traditional and archaic.

Management of people can result in improved productivity and higher earnings, to the mutual satisfaction of employer and employee.

The following illustrates this point:

Viewfoil 1

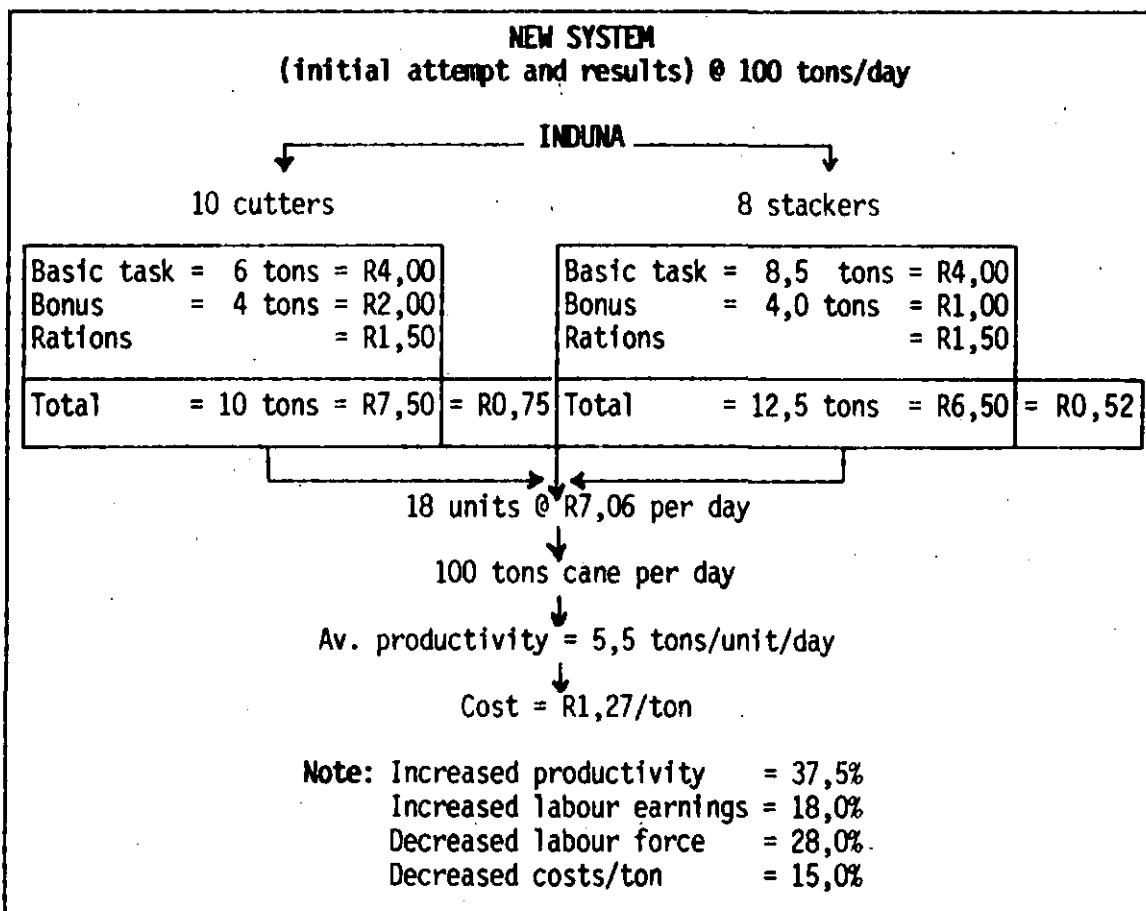


PROBLEMS AND DISADVANTAGES OF OLD SYSTEM

1. Entrenched by tradition; difficult to change without suspicion
2. Cutters not able to relate bonus to work done (time lag)
3. Two stage operation, ie cut then stack/load
4. Low productivity per cutter
5. Large labour force and dependants + rations + accommodation + medical etc
6. Ratio of work to leisure time disproportionate
7. Induna functions at lowest level of supervision
8. Unmotivated labour with all attendant problems



Viewfoil 2



ADVANTAGES OF NEW SYSTEM

1. Attempting to modernise employer/labour relations
2. Labour able to relate bonus payment to work done
3. Increased productivity and trust
4. Single operation, ie mass production principle
5. Reduced labour force and attendant problems, rations etc
6. Improved productivity reduces leisure time by only ± 1½ hours
7. Induna now participates in management process
8. Positive feed-back from labour
9. Reduced costs ± R0,23- to be used for end of season bonus
10. Stable, more permanent and contented labour force

PROBLEMS

1. Daily cash float for bonus scheme
2. Control and possible misuse of system (chips)
3. Yield per field must equal wages and bonus payments
4. Labour have difficulty in saving daily bonus

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7 October 1985

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WORKER INVOLVEMENT MANAGEMENT (WIM)

by

Henry Moore

1. Introduction

WIM is not a new management concept in the sugar industry; it existed as early as 1961. The person who pioneered this philosophy in the sugar industry was Dougie Horton of Cosmoore at Camperdown. He realised that with the expansion of his farming enterprise he was no longer capable of utilizing fully and efficiently the resources on his farm. He decided therefore to seek the assistance of all his workers in the running of his farm.

I am not going to provide you with details of the initial frustrations and disappointments that Dougie Horton experienced or the great successes he eventually achieved with his revolutionary people management system; you can read the details yourself in a booklet about this outstanding man written by the well known Prof. JD Scott.

2. What is WIM?

It is the opposite of autocratic or dictator type management; it is not democratic management nor is it bureaucratic management. It is a consultative management system, ie. the workers are consulted (their permission is not sought!) for assistance in running the farm. The manager is still the "overall" decision maker but decisions are only made if the people concerned are asked for assistance in the making of these decisions. With WIM workers are managed not with authority but by persuasion.

People are basically anti external control and domination; with WIM they are provided with a means of self control and self motivation. With external control rigid targets are set leaving little or no choice to the worker in respect of how to attain these targets. With WIM workers also have targets but these are targets which they have helped set and the means and methods of attaining these targets are not prescribed but are left to their choice. There is a strong relationship between the "productivity and happiness of workers" and the "amount of personal freedom" they have in their work.

3. Procedure for introducing WIM:

- Top management must be committed to this philosophy.



- It must be introduced from the top; senior management must be involved first. Once it is functioning well at this level, it is appropriate to introduce it to the next worker level and so on until all levels of workers are comfortable within the WIM system.
 - Before introducing WIM to a specific work level, it is important to ensure that all workers are aware of their new duties, and how the system will function.
 - A WIM system should only be embarked upon when there is no crisis or unrest on the farm as voluntary participation is important.
 - A WIM system requires the lower level of workers to be trained in areas that are not directly related to management eg. business principles.
4. Advantages to be gained from a WIM system:
- Labour peace of mind.
 - Increased productivity through:
 - increase in motivation and creativity and a
 - decrease in labour turnover, absenteeism and work stopages.

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SAFETY IN AGRICULTURE

by T. Tedder, CG Smith Sugar Limited, Sezela

INTRODUCTION

Business leaders world wide proclaim that sound management practice is to optimise the use of all available resources. Accidents resulting in damage to equipment or property and in worker disablement or even death are counter-productive and wasteful. The recent promulgation of the new Machinery and Occupations Safety Act ⁽²⁾ has focussed attention on Agriculture.

The enormous expense of accidents has gone undetected as the most significant portion of such expenses are hidden costs. ⁽¹⁾ Furthermore, every manager has a moral and legal obligation to his employees for their safety and well being.

Of all accidents that occur 88% are caused by unsafe acts, 10% are caused by unsafe environment and mechanical conditions and 2% are caused by acts of providence. ⁽⁴⁾

Improved safety standards were applied at C.G. Smith Sugar Sezela, a Miller cum planter consisting of eight agricultural sections. At the peak of the season as many as 1,800 people are employed daily, and because it is a farming environment much of the work is hazardous (e.g. cane harvesting). Following the implementation of a safety programme, accidents have been reduced by 30%.

SAFETY ORGANISATION

In 1982 it was decided by management that a Safety Programme be implemented on the estate. The success of such a programme depends on the method of implementation and to this end, the following procedure was followed.

a) Objectives

An objective to reduce accidents on the estate and to comply with the requirements of a 3 star N.O.S.A. rating was established for each section.

b) Training

With the assistance of N.O.S.A., training programmes were conducted, where all the managers and supervisors on each section were taught an awareness of safety, safe work practices, procedures, reporting, and accident investigation methods.

c) Structure

Appointment of responsible persons were made on each section, in terms of the Factories & Machineries Act of 1941. Managers and Supervisors were appointed as safety representatives in their areas of control⁽³⁾ and Safety committees were established. Each Section has its own management team where each team member represents the workers in his control on the Section Safety Committee. All incidents or potential accidents are reported and discussed daily as part of the normal management meeting on the section.

The Manager then represents his workers on the Estate Safety Committee. Each Manager is in turn appointed as Safety Co-ordinator for a period of two months. His duties include the investigation of all accidents and the reporting back in writing giving details of the accident. Description, analysis, evaluation of loss, severity and recommendations on the prevention of further occurrence are reported to the Safety Committee. The recommendations on how these accidents can be prevented are discussed and Safety Standing Instructions setting out safe work practices and procedures are issued with immediate effect.

RECORDING & MEASUREMENT

All lost time accidents and total man hours worked are recorded daily. The frequency of accidents is calculated and this is displayed on the Section Safety Board.

The measure of accident frequency is the Disabling Injury Frequency rate (D.I.F.R.) ⁽⁵⁾ and is calculated as follows :

$$\text{D.I.F.R.} = \frac{\text{Disabling Injuries} \times 10^6}{\text{Man hours of exposure}}$$

A lost time injury is a disabling injury which results in an employee going off duty for one or more shifts, after that shift in which he was injured. Injury statistics over five years recorded at C.G. Smith Sugar Sezela are as follows : -

Insert Table 1

Further measurements are made where the injury severity rate is recorded.

The Disabling Injury Severity rate (D.I.S.R.) ⁽⁵⁾ and is calculated as follows : -

$$\text{D.I.S.R.} = \frac{\text{Days charged} \times 10^6}{\text{Man hours of exposure}}$$

Severity statistics over 5 years recorded at C.G. Smith Sugar Sezela are as follows :

Insert Figure 1

An analysis on the type of accident and parts of the body is also considered. A number of repetitive injuries occur. These are :

- a) Eye injuries caused by grass or cane injuring the eye while bending during weeding.
- b) Cut hands during the cane cutting operation.
- c) Cut knees while trashing and topping cane.
- d) Foot injuries arising from standing on sharp objects such as cane stumps.

Insert Figure 2

The reduction in direct costs of accidents has been significant. A 70% reduction was recorded between 1982 and 1983. The large increase in costs between 1983 and 1984 is due to the considerable increase in Hospital and doctors fees during that period.

Insert Table 2

The cost recorded in Table 2 do not reflect costs such as loss of productivity, down time, replacement of injured employee, insurance and Workmans Compensation contributions - these costs are hidden.

The total costs can be calculated once all the hidden costs are established.

ACHIEVEMENTS

The success of the safety programme has been acknowledged by N.O.S.A. with awards to the sections.

The results are as follows : -

- | | | |
|---------|---------------------|--|
| In 1982 | Esperanza | - 4 Star N.O.S.A. Rating |
| | " | - South Coast Region best improvement Trophy |
| | Beneva | - 4 Star N.O.S.A. Rating. |
| 1983 | Ifafa | - Hamilton Trophy awarded for best improvement
4 Star N.O.S.A. Rating |
| | | - 2nd Place Safety Performance & Improvement
Competition. |
| | Mgayi | - 3rd Place Safety & Performance competition. |
| | Beneva | - 4 Star N.O.S.A. Rating. |
| 1984 | Mgayi | - Million accident free man hours worked. |
| | Ifafa
& Lewisham | - Won the Agricultural Safety award together. |

At the time Agriculture was competing with Industry for the above awards

N.O.S.A. Grading

- | | |
|------------|-----------------|
| Sezela | - 4 Star Rating |
| Humberdale | - 3 Star Rating |
| Esperanza | - 4 Star Rating |
| Equeefa | - 3 Star Rating |
| Beneva | - 4 Star Rating |
| Mgayi | - 3 Star Rating |
| Lewisham | - 3 Star Rating |
| Ifafa | - 4 Star Rating |

COST OF ESTABLISHING A SAFETY PROGRAMME

The cost of setting up a safety programme on a typical Section is approximately R2 200.00. Included in these costs is labour, fire extinguishers, safety signs, paint and material for machine guarding. Protective clothing has not been included in these costs as they are issued as standard policy.

DISCUSSION

A safe work environment is mandatory. Any person who contravenes or fails to comply with any provision of the Safety act shall be guilty of an offence and liable to a fine not exceeding R1000 or to imprisonment for a period not exceeding six months and, in the case of a continuous offence, to an additional fine of R5 for each day on which the offence continues or to additional imprisonment of one day for each day on which the offence continues. Provided that the period of such additional imprisonment shall in no case exceed 90 days. (2)

A farmer having an accident on his premises must be aware that the Inspector of Machinery has the right to investigate such accidents as he deems fit.

Once established, a safe work environment is relatively easy to maintain. Workers attitudes are more difficult but this is where the real effort lies. It is managements task to keep safety a burning issue with employees. The benefit of improved housekeeping encourages attention to detail. An improvement in all aspects of the operation ensures.

CONCLUSION

The reduction in accidents and cost savings that have occurred at C.G. Smith Sugar Sezela, since the implementation of the safety programme has been considerable. Workers have responded enthusiastically to a safer worker environment.

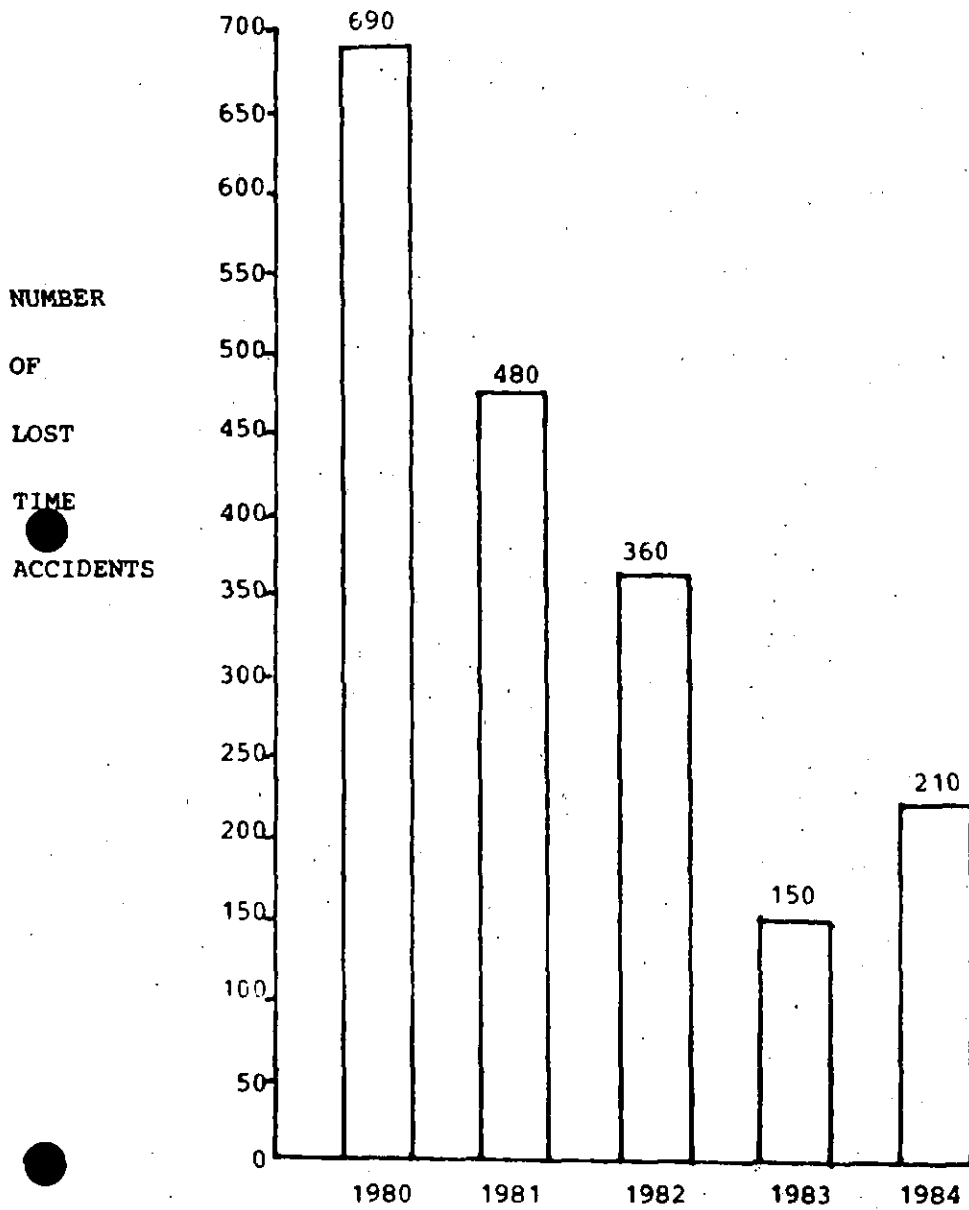
TABLE 1 : RECORD OF MAN HOURS WORKED, L.T.A. AND D.I.F.R. FROM 1980 TO 1984 :

PERIOD	MAN HOURS WORKED	LOSS TIME ACCIDENTS	DISABLING INJURY FREQUENCY RATE
1980	4 680 729	106	23
1981	5 746 329	94	16
1982	5 651 208	70	12
1983	5 961 825	32	5
1984	5 247 360	38	7

TABLE 2 : TOTAL DIRECT COSTS PERIOD 1982 - 1984

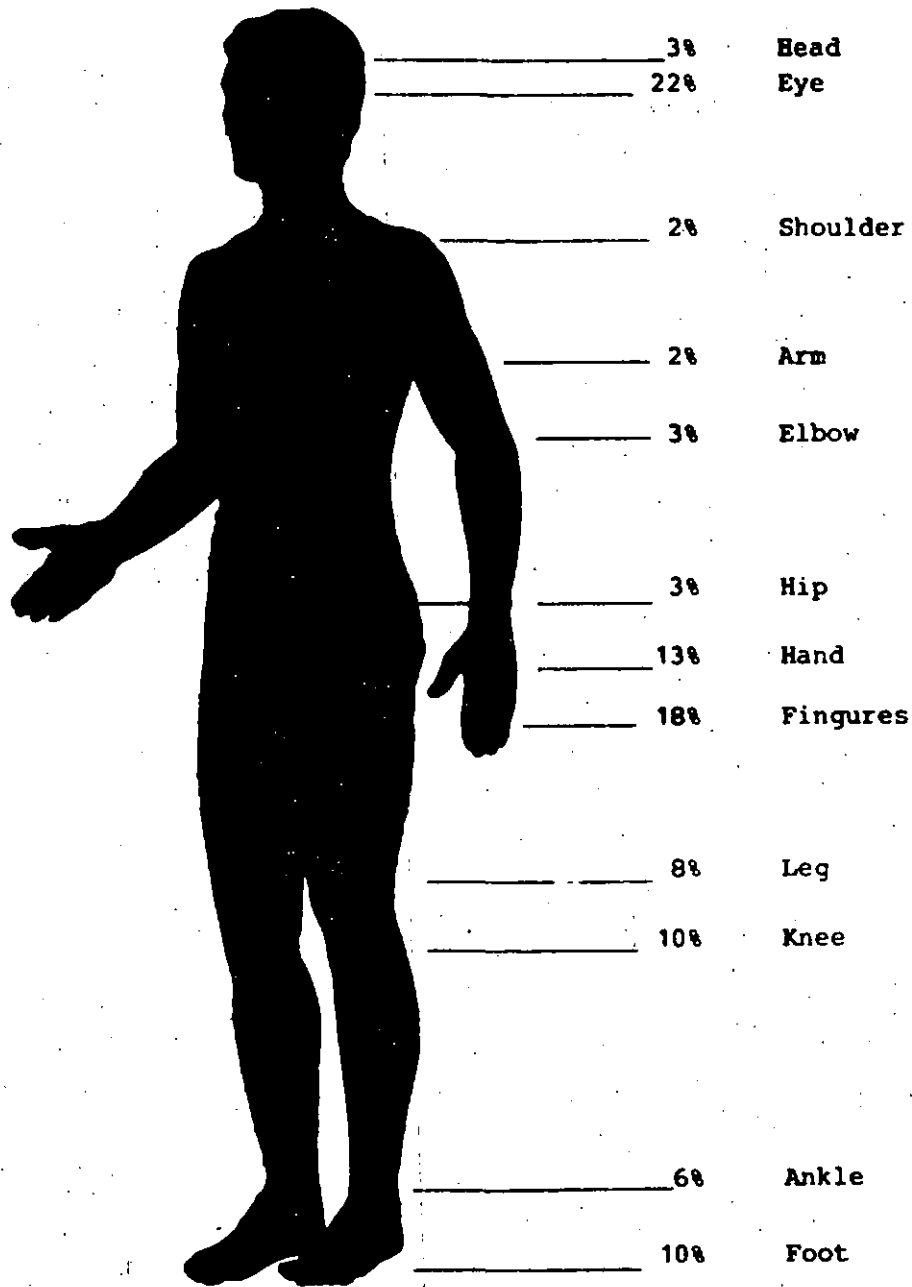
ITEMS	1982	1983	1984
Hospital Fees	6 990	1 745	6 473
Doctors Fees	3 586	1 146	3 553
Wages Paid	2 926	1 223	2 141
Sub Total :	13 502	4 114	12 167
Less 75% W.C.A. Refund	1 388	398	1 252
Total Direct Costs :	12 114	3 716	10 915

Figure 1 : Severity statistics recorded at C.G. Smith Sugar, Sezela 1980/84.



DISABLING SEVERITY RATE 1980/1984

Figure 2: Percentage of injuries recorded on various parts of the body over one year.



ACKNOWLEDGEMENTS

1. N.O.S.A. for the assistance and guidance.
2. C.G. Smith Sugar, Management and Field Staff.
3. Assistant Managers and Supervisors for making the effort put into Safety worth while.

REFERENCES

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2. Government Gazette, (1983) Machinery and Occupational Safety Act, 1983.
The Act. Volume 213 No. 441.
3. Government Gazette, (1983) Machinery & Occupational Safety Act, 1983
Regulation 9 Subsection 4.
4. N.O.S.A., Safety Management Techniques, 1980 Chapter 1 Page 2.
5. N.O.S.A., Safety Management Techniques, 1980 Chapter 6 Page 2.
6. N.O.S.A. MBO System 1979 : 1 - 46.

**SOUTH AFRICAN SUGAR INDUSTRY
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MANPOWER DEVELOPMENT IN AGRICULTURE

By EK Ardē and CB Pfothenauer, CG Smith Sugar Limited, Sezela

INTRODUCTION

The depressed state of the Sugar Industry and the prospect of Unionization of Agricultural Workers will place increasing demands on field management. The burden cannot be born by the Section Manager alone. Upgrading of the Labour Supervisor to become part of the Section Management team is long overdue.

The drive for labour productivity in South Africa has long been an issue.⁸ Our analysis indicates that the Sugar Industry is not an exception to the national rule.

Excellent work has been done to improve productivity of machinery and other related areas. However, the educating, training and development of agricultural workers, has generally been under-emphasized. The largest component of operating cost is labour related. (Effective operation of machinery is dependant on the performance of operators). The upgrading of the worker will produce major cost benefits. Management focus on Ifafa Section over the last four years has been on the upgrading of all levels of agriculture. Improved performance is becoming evident and the level of job satisfaction has increased considerably.

MANAGEMENT THEORY AND PRACTICE ON IFafa SECTION

The management process on Ifafa Section is based on management by objective. MBO is a process whereby superior and subordinate managers of an organisation jointly identify common goals, define each individuals area of responsibility in terms of the results expected from him, and use measures as guides for operating the unit and assessing the contribution of each of its members⁹. However, central to applying the MBO theory is a pre-requisite to adopt a positive approach to motivational theory. The approach adopted ties in very closely to that of McGregor's Theory Y⁵. Theory Y presents a dynamic view of man. The individual is seen as having growth and development capacities, and the problem of motivation is now placed directly in the lap of management. Since the worker has potential, management must decide how to tap it.

No longer can management hide behind old Theory X assumptions, which regards the people (ie worker) as being naturally lazy and avoiding responsibility and requiring coercion before they will work. Management must re-evaluate its thinking and begin focussing attention on ways of allowing the workers to attain their upper-level needs.

FACTORS LIMITING MANPOWER DEVELOPMENT

Arising from the management theories practised, an in-depth investigation has high-lighted the following factors that have to be addressed in order for individuals to obtain development capacities.

- (a) Organisational structure
- (b) Selection
- (c) Training
- (d) Education
- (e) Team building and organisational climate
- (f) Development of individuals

Organisational Structure

On analysis, it became evident that the original structure (Appendix 1) was inadequate in terms of modern management methods. A major problem with the old structure was that it favoured a one over one centric management style¹. This lead to poorly defined job responsibilities, poor communication and confusion at the lower levels.

In addressing the problem, the organisational structure was revised (Appendix 2) resulting in a Section Management team based on the radic management concept¹. Areas of responsibility of each subordinate are clearly defined and the section's work activities are grouped to promote the concept of completed jobs. Four clearly defined work areas are:

- (a) Crop removal, land preparation and vehicle management
- (b) Crop maintenance operations
- (c) Section labour welfare
- (d) Section administration

Training

Before 1981, training of section supervisors and drivers was not specific to individual needs⁷. In order to overcome this weakness, performance assessment programmes were introduced¹⁰.

A pre-requisite of performance appraisal is a clearly defined job description for each position². These are used as a measure of performance after each season. Individual training needs are identified from poor performance, and training programmes both in house and away are implemented. Such training is specific to a need and the consequence of such training has high impact on individual performance⁴.

Education

Attendant to implementing specific training programmes is the need to improve educational standards. Table 1 details the definite improvement in general education standards of supervisors and drivers that has taken place on Ifafa Section over the last four years.

Table 1 Education improvement, comparing seasons 1981/82 against 1984/1985 involving drivers and supervisors

Standards	Seasons		Gain
	1981/82	1984/85	
STD I to IV	3	13	333%
STD V to VIII	2	3	50%

NB During 1983/84 season one of the two members with a Std V to VIII education was promoted to a Senior Supervisor on another section.

Education was improved using the 'Operation Upgrade' technique which educates workers in literacy and numeracy in both English and Zulu up to Standard 4. An advantage of this programme is that it affords the older illiterate employee an opportunity to improve himself. Such an employee,

with valuable practical experience, is not made redundant through changing job requirements.

Selection

For Ifafa Section the rule of having the right person in the right position is strictly adhered to. To ensure this, pre-requisites for each position are compiled with the relevant job descriptions. The first step in selection is to interview only those individuals who match such pre-requisites³. Experience has shown that, in the longer term, it is better to operate under complement until the right person can be developed or appointed. A further characteristic of Ifafa Section is that each of the Section Manager's subordinates will interview and appoint their own subordinates. This ensures a commitment to their sub-ordinates' development and performance.

Team Building and Organizational Climate⁶

It is recognised on Ifafa Section that goals are achieved not through individuals alone, but by team effort. This is achieved by every employee contributing to the decision that affects his own performance. Sound communication ensures that input into daily work planning is drawn from the lowest competent level in the organisation. The section manager co-ordinates the work plans and has the final authority over decisions.

An effective, democratically elected Liaison Committee is an essential aid to good communication. All valid complaints are freely discussed by the Liaison Committee and Management and necessary action is taken immediately. The labour force must have confidence in its management if a happier, motivated labour force is to be maintained. By having an active, lively Liaison Committee, problems tend to surface very quickly, and do not ferment and affect employees attitudes at work. Liaison Committee members are present at all disciplinary hearings and ensure that fair play is maintained.

It is necessary to preserve a positive attitude in all disciplinary hearings by allowing each member to participate freely in the proceedings.

Development

The most suitable employees for further achievement are identified by the five year plan. On Ifafa Section a skills inventory of all skilled employees is maintained and updated annually. The skills inventory identifies inter alia the following:

- Previous Training
- Performance Rating
- Education

Development is further encouraged by allowing employees with potential to perform in an acting position when any particular manager/supervisor is on leave, sick or on a training course⁴. This gives the individual exposure to the position and allows management to further assess the employee's potential.

Productivity achievements

Table 2 reflects the positive gains in labour productivity for Ifafa Section over the last 4 seasons. The gains achieved are attributable to a more competent and enthusiastic work force.

Table 2 Resource productivity - Ifafa Section

Activity	Season				Gain 84/85 vs 81/82
	1981/2	1982/3	1983/4	1984/5	
Land preparation -ha/100 md	5,87	6,86	6,13	9,54	+ 62,5%
Planting "	3,41	3,63	3,48	4,39	+ 28,7%
Fertilization "	37,93	51,05	63,26	61,74	+ 62,8%
Weeding "	4,52	4,16	6,77	9,67	+ 113,9%
Harvesting tons/md	5,50	5,30	4,9	5,5	0
In field transport tons/md	32,80	28,87	28,19	36,42	+ 11,0%
Transshipment "	17,25	18,90	21,33	27,18	+ 57,56%
Man day/1000 tons	3,52	3,72	3,88	2,91	+ 17,33%
Tons cane harvested	42988	43370	38561	52518	
Tons cane ha/month	5,0	4,63	4,14	5,8	+ 16%

NB 1983/84 season was a drought year

CONCLUSION

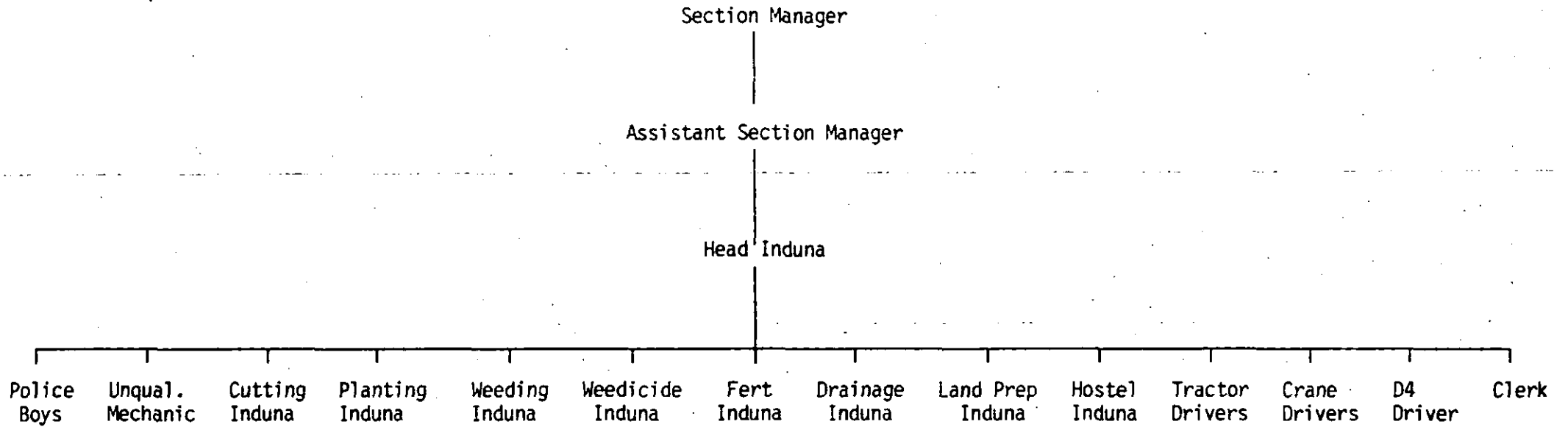
Manpower development will take time, but it has to have a beginning. Not all Black employees will take up the challenge, but if equal job opportunities are offered and wages are sound, it is not unreasonable for management to expect higher standards of performance from their employees. Recreational and welfare facilities must also improve at the same pace. Black advancement in agriculture will make a Managers' job a lot easier by utilizing employees potential to the fullest. With the present economic climate in the Sugar Industry many estates and growers will be looking to improved profitability merely to survive. Cost cutting exercises are not an option if budgets are well prepared. Improved cane production through better management is possibly the only viable alternative.

NOTES

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2. Allen, L (1960). Development of Personnel. Professional Management Guide : 191
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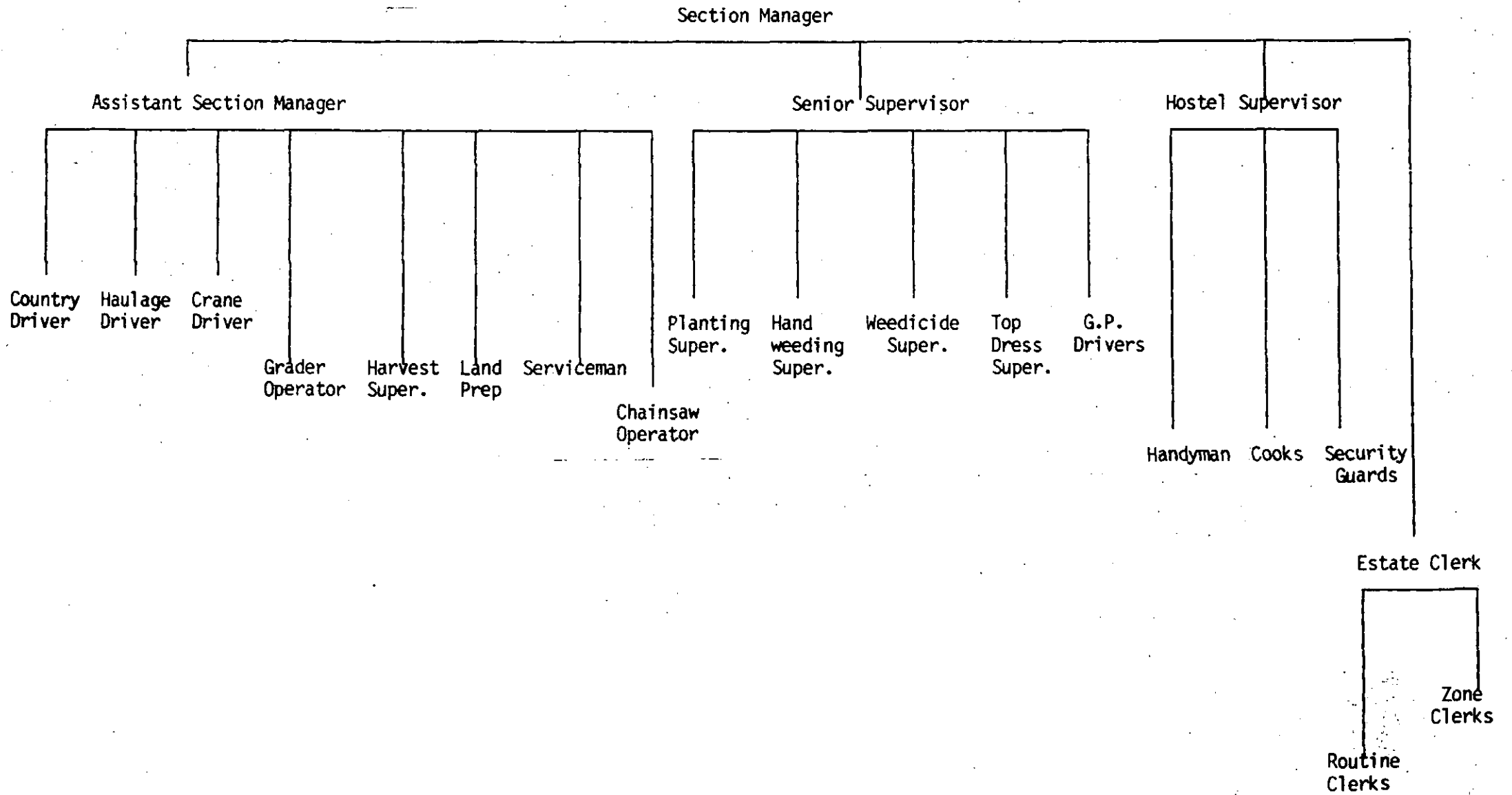
Appendix 1

OLD MANAGEMENT STRUCTURE



Appendix 2

NEW MANAGEMENT STRUCTURE



**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

TRAINING IN MACHINE MANAGEMENT

by Dick Statham

1. Objective

The objective of the talk is to promote awareness of the following:-

- 1.1 The consequence of error in mechanised operations is expensive and can be reduced by training.
- 1.2 Training in machine management should be carried out on a top down basis so that productivity improvements can be effected throughout the whole management structure and not just at the operator level.
- 1.3 Measurable results can be achieved by training.
- 1.4 Training should become an integral part of management practise.

2. Consequence of Error in Machine Operation & Maintenance

- 2.1 What do you spend per annum on the following operations?:-
 - a) Fertilizer
 - b) Weed killer
 - c) Nematicides
 - d) Land preparation
 - e) Haulage
 - f) Tractor and machine maintenance
- 2.2 What is the cost to you of a 10% error in these operations? On a very large Estate or Company, what would a 1% error cost you?
- 2.3 The above figures of 1% and 10%, I believe, are small and that the real error is more like 20%. What does a 20% error cost you? I believe we should be looking at improving our productivity to a 5% error for a start.

2.4 How can training aid us in achieving these productivity improvements?

3. Training for Productivity

What options are open to us to improve machine/employee productivity in the area of machine management?

3.1 Managers

- a) Courses in General Management to promote awareness.
- b) Technical courses given by "the trade" and the Experiment Station to improve technical knowledge.
- c) Work/Method study techniques.
- d) Bonus schemes to improve productivity through motivation.
- e) Productivity improvement seminars, W.I.R.E. Projects.

All the above improve the reinforcement to training for productivity given to those in Supervisory and Operator positions. This promotes productivity improvement and motivation at the lower levels.

3.2 Supervisors

- a) Courses in supervision.
- b) Technical courses given by "the trade", Experiment Station, or in the case of large organisations, by a competent person. These courses should preferably be "hands on" courses.

3.3 Operators and Servicemen

- a) Practical, hands on courses, which teach the incumbent how to carry out a particular operation or job in detail.
- b) The above courses could be available from the Experiment Station, the trade or run by a competent "in house" trainer.
- c) Bonus incentives and annual competitions help to improve productivity.

4. Results

Results have been achieved by training, but the results can not be attributed to a particular level of employee. The integrated training programme from Managers, through Supervisors to Operators have achieved the following measurable results in a large company:-

- Land Preparation - 25% improvement over 5 years.
- Infield Haulage - 18% improvement over 10 years.
- Tractor availability - 82% to 95% over 10 years which gives a saving of 13 tractors a day.

Fertilizer, Weedkiller and Nematicides - vast savings have been made, but have not been accurately measured due to the change in information systems available, but will, I believe, be in the region of 15%.

5. Conclusion

- a) There is no doubt that we do have large errors due to untrained Management and Operators.
- b) Training is most effective if carried out at all levels by competent instructors.
- c) Results of training are a combination of input from Management to Operators.
- d) Training for Machine Management should be an integral part of Estate Management.

R.N. STATHAM

21st October 1985
Ref: RNS.7/cw

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

PRODUCTIVITY ON A SOUTH COAST FARM

by V Watson.

The cane growing industry in the RSA is in a cost price squeeze situation, with ever increasing costs of fertilizer, fuel, chemicals, machinery and labour on the one hand, and controlled prices or low prices on the other. The theoretical expertise to produce cane economically is freely available, but the management expertise is more difficult to obtain. Bearing in mind the foregoing, we feel that the greatest contribution we can make to reduce the cost squeeze is on the management side, and as labour amounts to 35% of our overall costs, this is where management must concentrate its efforts. In other words, to get out from under, productivity must be increased.

Our company farms cane in a variety of areas, but for the purpose of this paper we will restrict ourselves to our steep South Coast estate.

Productivity consists of two main facets, firstly productivity of the mind and secondly productivity of the body, and without the first one the second cannot happen. To obtain productivity of the mind is extremely difficult due to the fact that the industry has had it good for so long and an enormous Rands cents factor has become inbred. To stimulate staff and labour out of this condition requires a catalyst and to this end, we have Quality Circles within the company who meet regularly, on a peer group basis. These discussion groups are beginning to bring forth ideas which show great promise. In parallel to this, in our area on the South Coast, your extension service has started up Work Study groups amongst the local growers who meet on a bi-monthly basis to discuss all aspects of cane production excluding direct financial aspects, that is we do not talk money. These groups are also coming up with some very useful ideas.

Apart from those groups, our own internal policy is one of continuous communication not only across lines but also up to the top and right down the lowliest labourer. Regular meetings take place with Area Managers, Section staff, Supervisors, Works Councils and labour. We try to involve everybody in the productivity scene.

To quote some examples of the improved productivity emerging from those discussion groups.

We at CBL have been battling to reduce the amount of labour required in the planting operation and, historically, we have used anything from 32 to 45 man-days per hectare in this operation. By listening to other people talk on their systems and by reading Phil Landrey's paper on planting, we began to understand where we were losing out and then with the following changes to our system, our productivity has improved to 18 man-days per hectare. Our alterations consisted of:

- preparing the seed in the nursery field
- placing the seed in bags or loose at the most convenient spots in the field, thus avoiding wasted time walking for seed
- pre-marking the area to be planted that day, enabling the labour to see what had to be done
- tasking the labour as a gang
- spraying a fungicide on the setts by knapsack in the row rather than hand dipping.

These ideas cost us nothing and saved 10 to 20 man-days per hectare.

Historically, for one reason or another, we have had poor productivity out of our haulage drivers who, though working a full day and doing 18 to 20 loads per day, were only achieving 60 to 70 tons per day. The main problem here was not lack of trying in the haulage fleet, but poor stack weights in the cutting field. In 1977, our average output per man (all labour) in the field was 2,93 tons per man per day. This gave us an average stack weight of \pm 3,2 tons and could be as low as 2,0 tons per stack. To increase the haulage output, we revamped the complete system from cutting to trailers. In effect, we separated the cutters from stacking and made them into individual processes. Cutting is now done on an area basis by one gang and stacking similarly by another gang. This I can assure you is not without its heartaches, but we persevered and are now benefiting from the results.

Last season, our average output was 3,8 tons per man-day with a stack weight of 4,5 to 5 tons which, at 20 loads per tractor, gives us 90 to 100 tons per day, and in actual fact we averaged just over 100 tons per driver for the season. We had one snag last year inasmuch as we could not motivate the stackers to stack more than their basic task of 8 areas per day. We have overcome this problem this year by increasing their basic pay to include 2 areas bonus and giving them a basic task of 10 areas per day. This was done in consultation with the stackers and, although they would not do 10 areas per day for bonus, they are quite happy to do it for basic!!

When we talk about 3,8 tons per man-day this figure includes supervisors, markers, gleaners, firebreaks etc, ie all labour in the cutting field and the 3,8 tons is only pertinent to the steep sections. Our flatter areas cut only and the cane loaded directly into dump trailers; there our cutters averaged 10,5 tons per day for the season and the haulage tractors 137,6 tons per day, ie 21,7 tons per hour.

Now this brings us to one of our biggest problem areas. We do not know how much work a labourer can give us in a day.

To illustrate this point, we have carried on quite happily for years thinking that one labourer can fertilize one hectare per day by wheelbarrow. At the beginning of this season, we talked about this and concluded that this was a case of grandfather and we should do something to improve the position.

The expression 'grandfather' comes from the fact that throughout the industry on trying to ascertain why things are done in a specific way, the reply is often "I don't know but we have always done it that way" with the surmise that the industry is run on witchcraft and grandfather. What we have done is to task our fertilizer gangs on a weekly basis giving them 9 hectares per man per week. Needless to say they are finishing the job in 5 days. They set their own times of starting and finishing. The Supervisor no longer chases them; he now concentrates on the quality of work being done. The fertilizer labourer is now doing almost 2 hectares per day. Why? We feel he is motivated because the gang is not being harried by the Supervisor. They know at the beginning of the week their work for the week, and on finishing the job they are in a position to make more money if they want to. They are their own boss giving them a feeling of being trusted.

This particular system has its own peculiar problems attached and the following may give some food for thought.

We are trying out the same idea on hand weeding whereby a gang is given a task to accomplish in 6 days. This theoretically should be a 'normal' day's task multiplied by seven to achieve the extra output. Should the task be completed in less than the given time, then the option is given to take time off or, hopefully, start the next task and pocket the pay for the full time allocated. Two distinct reactions have shown up. The labourer on contract is opting for the day off and the togt labourer is opting for the extra work and pay. All of them like the idea and are undoubtedly working better, better quality, longer hours, greater daily output, more enthusiasm etc. Why the different outlook?

We think gang tasking has possibilities for the future when we can sort out the mechanics of the system. 'Gang tasking' as we call it is simply contracting out the job to somebody for a particular price; the job to be finished within a particular time.

We would like to conclude by saying that we have only scratched the surface and until we learn to motivate mind and matter, we cannot get very far. At the same time, we have learned that whenever we think that we know all the answers, somebody changes the questions.

VW/HDN
October 1985

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

HUMAN RESOURCES MANAGEMENT

by A Edmonds

The human resources used on our farms comprises the major part of our budget, yet in most cases the time spent by management in developing, controlling and monitoring productivity would indicate that we have failed in addressing the biggest problem on the farms - labour productivity.

One must take into consideration the realities of the socio-economic factors which dictate the present and the future nature of the labour market:

- long term unemployment in the industrial sector
- rising Black aspirations

As farmers we can only survive in a situation where people-pressure is mounting by making some contribution ourselves in terms of meaningful job opportunities. I can only see hope if there is job creation in the industrial sector, development of the informal sector, and farmers making as much use of people to make their farms as productive as possible. Hence human resources management.

Before we talk about human resources management, the history of the 'on farm' situation should be known.

(See diagrams of organisational structure.)

1. Traditional situation

2. Enlightened management

- a) Intensive training programme, including form series tests, co-ordination and vision, tractor care, tractor learner driver, implement setting, knapsack operator, disease inspector, boomspray operator, handyman-bricklayer, welding, elementary mechanics, cane cutting and various indunas' courses, including junior supervisors.
- b) Incentive schemes for cane cutters.
- c) Increased worker/management contact.
- d) Continued upgrading of workers' housing and also working conditions, eg

- knapsack operators - protective gear
- knapsacks checked by induna
- conductors - gloves



3. Worker participation

The Experiment Station becomes involved by sending an instructor onto the farm to explain the concept of productivity, costs and motivation to the whole work-force.

Management committee is appointed by manager and supervisor.

Early advantages

- Formal communication between workers and management on a regular basis.
- Good forward planning done by management team.
- Report back of performance resulting in immediate rectification of any problems that arise.
- Formalised situation giving rise to expression of worker initiative.

Examples

- a) No weeding induna - weeders work in group.
- b) Haulage induna takes charge of whole operation - his daily tons delivered is measured and made known to him. (Suggested sites.)
- c) Cutters wanting immediate feedback of performance - once given has resulted in big productivity increase. They have also agreed to minimum productivity levels.
- d) Citrus induna participates in overall management of orchard.
- e) Driver for soil conservation - his responsibility.

What must be stressed at this stage is that this system is still in its infancy in my work situation, but I believe very firmly in it and only expect to reap real benefits in two or three years' time.

In order for us to be successful, we must have a well motivated work-force and I believe that human resources management presents us with the means of achieving this.

AE/HDN
October 1985

**SOUTH AFRICAN SUGAR INDUSTRY
AGRONOMISTS' ASSOCIATION**

STAFF MANAGEMENT ON A ZULULAND FARM

by RV Gordon

There are two main resources that affect the profitability of the average farm. The two resources are your labour and machinery.

If your labour is trained and utilized properly then your machinery will also be utilized efficiently.

Our labour is divided into four categories:

- overseers and head driver
- drivers and supervisors
- cane cutters
- general labour

1. The overseers control the day-to-day running of the farm and in conjunction with the head driver, tractors are allocated to the different operations.

The head driver then supervises all the mechanical operations, while the overseers share the labour operations, ie (a) cutting, drains and field layout; (b) weeding, herbicide and fertilizer.

These three will meet me on a daily basis to discuss future planning etc.

2. The supervisors are responsible to the overseer and each overseer has two supervisors to assist him in his work. I consider tractor drivers to be on the same level as the supervisors.

The drivers are directly responsible to the head driver. All drivers are fully trained before they are given a tractor, irrespective of what qualifications they might have when they are employed. In general however, I like to train a driver from our existing labour force and once we are satisfied he can drive, then use the Training department to assist.

Generally, each driver has his own tractor and only in an emergency is another driver used.

If a tractor is in for repairs the driver has to be there so he can understand why a tractor must not be mishandled, and if damage can be attributed to the driver, this will also be pointed out.



3. The cane cutters are divided into three categories according to performance. No bonus is paid as not only have I found bonuses to be a consistent area of discontent, but most bonuses are considered spending money and the family never benefit. Each category has a separate task and work in separate gangs of about 12 men per gang.
4. All labourers work on an individual task system and these are set by the supervisors.

Conclusion

Finally, housing and recreation are items that should not be neglected, and I for one am not happy with the facilities I provide. However, as you are aware, the economic conditions are hampering the upgrading of accommodation. We do have a farm school for our staff children and we encourage the men to have their wives with them.

Labour Unions are something we must be ready to accept, and in this respect we have a works committee consisting of the overseers, supervisors, plus two representatives of the cane cutters and two representatives from the rest of the labour. They in turn meet with me on a monthly basis.

It is very important not just to give orders, but for labour to realise why a job must be done in a certain way.

RVG/HDM
October 1985

SOUTH AFRICAN SUGAR INDUSTRY AGRONOMISTS' ASSOCIATION

INDUSTRIAL RELATIONS : EMPLOYER/EMPLOYEE INTERACTION AND RELATED CONCERNS

by Allan J Fuggle

Industrial Relations, also called Labour Relations by some sectors of the economy, in essence refer to the interaction that takes place between employer and employees arising from their respective needs of each other in the production process in providing goods or services. The rôle of the State is also important as it provides the framework within which, and the rules whereby, this relationship is governed.

There is however a far broader aspect to Industrial Relations, the pressures that are generated by the power play between the three main parties have spin-offs into society at large. Likewise, societal pressures influence what happens in the work environment. Perceptions and beliefs are built on the base of experiences both at work and after hours, and many of the misunderstandings that occur arise from these.

A Study headed by Professor Martin Nasser of the UNISA School of Business Leadership during 1984, entitled Project Free Enterprise, is well worth reading as it highlights the perceptions held by South African workers regarding the workings of free enterprise in this country and how the benefits are believed to be distributed. Firstly, workers generally believe that they are discriminated against and that the system benefits only managerial staff. Black workers in particular see themselves as grossly discriminated against in terms of the distribution of profits and feel they could earn more if Whites earn less. Secondly, low-income employees are more concerned than others about wages and training. Management is seen as insensitive to the plight of Black labour. These perceptions of gross inequality, even though they may be incorrect, are "believed" to be the case and must inevitably have an adverse influence on industrial relations in this country.

The Chief Minister of Kwa-Zulu, Chief Mongosuthu Buthelezi, in an address to the International Institute of Personnel Management Convention in Durban during early October made the following points which are critical to the future I.R. of this country.

"Disparities between the have and have-not Blacks foretell of the problems. The levels of unemployment and underemployment will not be eliminated in the foreseeable future." There will be vast squatter areas without adequate housing and "commerce and industry will have to recruit people from such environments." He goes on to say that "unless Black managers and Black supervisors are meaningful to the depressed neighbourhoods in which they live, and unless their status as supervisors and managers has a benefit for the neighbourhoods in which they live, the have-nots in those neighbourhoods will resent them as the haves." Employers will have to involve themselves in making a contribution beyond the place of work in that "it is unrealistic to think of future supervisors and managers migrating out of depressed areas to live in middle class suburbs." "The people they supervise and manage cannot migrate with them, and if they migrated away from them there will be a growing credibility gap between management and labour".

"More than half of South Africa's Black population is 15 years and younger" and this "huge population bulge" is now beginning to move into the job market. Many of these people "can now be misled into stone-throwing, burning and looting" and it is from these teenagers where "managers will have to recruit the workers of tomorrow. It is from this population that Personnel Managers will have to find the supervisors and managers".

The relationship between industry and society will have to receive increasing attention. "For too long there has been an underlying assumption that our country needs to create a Black middle class who behave like Whites. Too little thought has gone into the need to integrate employment practices with the new society which will have to be created. Buthelezi is "deeply convinced that the free enterprise system must survive if we are going to establish a meaningful society capable of moving away from poverty" but "the captains of industry have not fully recognised the polarisation that has taken place" and how this foretells of problems in the future. "Management styles are going to become evermore important as a criteria for company failure or success".

The authoritarian manager may succeed in the United States, as does the manager who emphasizes teamwork and joint decision making, but in "South Africa, management will find itself much more circumscribed than is the case in Western industrial countries". There will be constraints not found in other parts of the world.

TRADE UNIONS

Although at this stage the Labour Relations Act, Basic Conditions of Employment Act, and other related legislation tends to leave Agriculture out of the picture by excluding agricultural workers from the definition of employee (in the same way as domestic workers are excluded), this is not likely to remain so for much longer. In fact, the White Paper in response to the Wiëhahn Report stated that when collective bargaining rights are extended to additional categories of workers, those agricultural employees in the "organised sector" of the sugar and forestry industries would be amongst the first to be considered. Rumour, from fairly reliable sources, is to the effect that a recommendation in this regard has already been tabled with the National Manpower Commission so that workers on company owned farms be covered as soon as possible.

There will be some who might see this as a retrograde step and the undermining of management's right to manage, whereas others might take the view, as did Clarence Darrow (famous American Criminal Lawyer) in 1909 that "with all their faults, Trade Unions have done more for humanity than any other organisation of men that ever existed. They have done more for decency, for honesty, for education, for the betterment of the race, for the developing of character in man, than any other association of men".

**TODAY'S REALITIES - TRADE UNIONS IN AGRICULTURE AND
IN THE SUGAR INDUSTRY**

It is not illegal for Agricultural Workers to join a Union, although at this stage the incentive to do so may not be there, as with the Labour Relations Act not being applicable to this sector any legal action taken by a Union has to be by way of common law or other statutes. This makes it fairly unattractive for the Union movement to recruit in Agriculture. There are however inroads being made by some Unions for political/ideological reasons.

The SAAWU has spawned the Farm and Allied Workers' Union (FAAWU) which has offices both in Stanger and Tongaat and it is actively recruiting workers in these areas, with SAAWU itself working in the Illovo area.

The Black Allied Workers Union (BAWU), which has a Black Consciousness ideology, is claiming majority representation in a large timber plantation in the Piet Retief area.

The two main Unions involved in the Milling sector of the Sugar Industry are the National Sugar and Refining and Allied Industries Employees' Union (NASARAIEU) and the Sweet Food and Allied Workers' Union (SFAWU) a FOSATU affiliated Union. The General Secretary of NASARAIEU is currently suspended from operating as he is subject to a court interdict arising out of the alleged misappropriation of Union funds. It is interesting to note that many of the members of that Union say they want him as their leader "guilty or not guilty". The court is to sit on 22 November.

DO'S AND DON'TS IN I.R. WHEN NO UNION INVOLVED

Don't make a habit of "showing" the workers who's boss. This should be automatically obvious through good leadership and decision making (which often would involve joint problem solving). The days of the autocratic "strong man" are heading for a fall.

Do keep communication channels open. Managements have a knack of telling (sometimes well) but not of listening. Most I.R. problems come about through lack of feedback or upward communication.

Don't allow a climate to develop where the workers feel that the only time concessions are made is when they go on strike. Be realistic and give way in pre-strike negotiations when you can afford to do so, but realise that everytime you give way to strikers demands you reinforce their view that this is the way to get results.

Do involve your workers more in the running of your operation and be more open so that the misperceptions about the free enterprise system and their feeling of being exploited is not left to ferment.

"You get the Industrial Relations you deserve!!!"

A J FUGGLE
PERSONNEL MANAGER
TONGAAT-HULETT SUGAR
MAIDSTONE MILL

OCTOBER 1985