Session 8
Paper (a)

THE TEAM APPROACH TO QUALITY AND PRODUCTIVITY IMPROVEMENT

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Introduction

My aim in this presentation is straight forward. I want to take the findings from research carried out in the area of small group behaviour and to assess their relevance to productivity in the logging industry.

The core question to be answered is this.

Do groups that are more "productive" possess characteristics that set them apart from other groups? Research suggests that the answer to this query is clearly yes. So let us now look at those characteristics under a number of headings.

Some General Features

Productive groups tend to be those that are effective at clarifying unstructured or unusual situations, have good communication between members and a clear understanding of the task at hand.

Those groups which possess high morale (often based on good friendships) tend to put in more effort and so are sometimes more productive. The extra stability helps in this given that less time is spent on "power" struggles within the group and disagreements between members are better tolerated.

It does seems too that productive groups are aware as to what makes them effective.

Competition Versus Co-operation

While a co-operative rather than a competitive environment can lead to higher morale - it does not necessarily lead to higher productivity that we might assume is linked to morale. Although competitive groups can produce greater unit outputs, these groups are often less efficient. An important issue that relates to the theme of this conference is that quality of output can be higher for "co-operative" groups that have members who have a single group goal in mind. Indeed an agreed upon goal for the group is an important factor for both good levels of satisfaction and productivity.

Compatibility of Members

In the main, groups having members who get on well with each other tend to show higher productivity than those in which members are not compatible. However, research results in this area often contradict this view.

Social Characteristics

Because of what we might call "cultural factors", all male or all female groups tend to be more productive than mixed gender groups, because they spend less time on social-emotional matters. Groups composed of friends tend to perform better than those composed of people not known to each other unless their time is dominated by social-emotional concerns.

Research on the length of time individuals belong to a group suggests that productivity is better in groups where membership is stable. (The whole issue of labour turnover in the logging industry comes to the fore in this context).

Cohesiveness

Regardless of the quality of supervision (or whether there is any supervision at all), highly cohesive groups tend to work harder. Cohesiveness is defined here as, the degree to which group members like to interact with each other and show mutual respect.

Group Size

The guiding principle here is called "least group size". This view suggests that groups should be just big enough to cover the range of relevant skills to solve the problem at hand. Larger groups tend to be less efficient as they are often less friendly and require greater control. An important adjunct to this is that as group size increases, the average contribution from each member decreases.

The Task

The existence of clear group goals (as opposed to individual goals) with a clear set of rules for their achievement, good coordination of individual activity and greater information on the task at hand all lead to greater effectiveness and productivity.

Leadership

It is generally accepted, from research, that good leadership is a basic requirement for efficiency. However, there is a tendency for the presence of autocratic leaders to result in groups producing more but with a product that is of lower quality. Democratic leadership is usually associated with higher quality output. Greater productivity tends to be achieved when leadership functions are shaped within the group and where the leader is able to accurately judge the level of skill possessed by each group member and then allocates tasks accordingly.

Decision Making

Accurate and/or appropriate choices for action has the potential to lead to greater output of higher quality. Research in this area suggests that consensus achieved within a group generally leads to better quality decisions. However, it also seems that when there is only one "correct" decision available, "majority rule" tends to produce the "right answer" more often.

Training

This of course is a topic that will be dealt with in a later paper but some comment is in order. Perhaps the clearest result of any area of research on small groups is that showing a direct link between productivity and effective training no matter what the task. Furthermore, effective training depends to some extent on the amount of feedback the group or individual members get on what impact the lifting of skills has on their performance. Understandably group moral is lifted if positive feedback is received, although "moderate failure" tends to produce greater motivation to become effective than either high or low levels of under-achievement.

Implications for the Forestry Industry

One now needs to ask whether the huge amount of research on small groups (rather brutally summarised above) can give any pointers to those in the industry who are interested in improving productivity and quality. Unfortunately the answer to this has many "either/or" aspects to it - some of which we don't have time to deal with this afternoon. A good example though, would be the finding that in competitive environments, high productivity is often gained at the expense of member satisfaction which can lead to group instability and a decline in quality!

Furthermore, many of the factors that seem to be conducive to higher productivity lie in the "personality" "compatibility" area which requires the development and/or application of quite sophisticated selection procedures which the average logging contractor, say, hasn't got the time to implement. So where does this leave us? With another case of "wasted" research effort? I don't think so, for there are certain aspects of the work environment that the industry can attend to immediately and, in this regard, I would like to mention just two-labour stability and training.

(a) Labour Stability

The forest industry has a reputation for suffering higher than acceptable amounts of labour turnover. This in turn can lead to a drop in group cohesion and morale and a tendency to focus on individual as opposed to group goals. Each of these elements can have a negative impact on both productivity and, more importantly, quality.

The industry needs to recognise, across the board, that the most important resource it has is it's human resource. No amount of technological and biological advance can deliver its full gains to the industry if the industry does not get the human equation right.

(b) Training

Given the high correlation between quality output and effective training, it is essential that the industry pushes, even more, the essential importance of training and education to the development of a vibrant industry that is capable of delivering its full potential. For too long now, some parts of the industry have staggered along with an "adhoc" "learn from your mates" type "upskilling" that is perhaps necessary, but

certainly not sufficient at this time in the industry's growth. (I know Bryan Wenmoth will be giving you much more detail on this shortly). Training needs to have a more developed philosophy than just the "this is how we do it on our patch" approach that tends to exist in some areas.

By focusing on these two aspects of the industry's planning, I believe you can continue to develop and improve the industry's performance as forestry enters an exciting period of maturation in this country. Flexibility of thought and the ability to focus on the human resource will be the key to the optimal use of the valuable bio-technological resource under your stewardship. How we do this might be the topic of some future research and/or conference, or indeed, the paper to follow by Peter Mitchell.