

## **THE APPLICATION OF TOTAL QUALITY MANAGEMENT PRINCIPLES TO SUGARCANE RESEARCH AND EXTENSION PROGRAMS**

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CSR Ltd., a major Australian sugar manufacturing and building materials company, has recently adopted a team-based quality management program known as Building in Quality (BIQ). This program emphasises the role of the customer, the importance of measurement and the need to involve employees at all levels in decision making.

The Technical Field Department of CSR Sugar Mills Group conducts agricultural research and extension activities aimed at increasing sugarcane crop productivity in the districts which supply sugarcane to CSR's raw sugar mills. This paper describes the approach used to apply BIQ to the Technical Field Department in the Herbert River District of north Queensland.

### **METHOD OF APPLICATION**

Two teams were created which were aligned with the main activities of the Technical Field Department. The Variety Improvement Team is responsible for breeding new and improved sugarcane varieties. The Land and Water Management Team promotes improved practices for the management of land and water resources through a farm drainage design and advisory service, a soil management advisory service, and collaboration with local catchment, land care and productivity groups. Each team developed methods for measuring team performance known as key performance indicators (KPI's). KPI's were developed in five main areas: people (safety); partners (customers and suppliers); presentation (housekeeping and appearance); process (efficiency, output, quality); and personal (team skills and training).

Employees have been closely involved with the development, measurement and charting of team KPI's. To measure safety awareness, a safety sampling program has been implemented where the level of compliance with agreed job safe practices is periodically measured whilst the team is at work. Customer expectations are measured by conducting surveys of farmers who cooperate with cane variety trials or who have used farm drainage or soil management services. Comments from customers are welcomed on ways in which operations can be improved, and these are followed up. Ratings from a monthly survey of workplace appearance are charted. Process KPI's include measures of output (number of trial plots planted), operational efficiency (cost per plot planted), quality (trial error c.v. (%)) and performance (new cane varieties compared with existing varieties).

### **OUTCOMES**

The BIQ program has been implemented for two years. Whilst it is too early to see changes in process measures, the biggest improvements have been in workplace appearance and tidiness, customer focus and safety awareness. For the two teams described above there has been continual improvement in workplace appearance. Customer surveys have been encouraging and a much better relationship is developing with our farmer cooperators. Safety performance continues to be accident free. Work teams are now the accepted means of conducting the business and there is a much greater awareness of the need to consult with others. Training programs are now in place to provide skills required by teams.