This study was an exploratory study that aimed at establishing the reasons why workers leave Kenya's sugar industry. The study further sought to establish the human resource practices in the sugar industry, assessed the extent of labor turnover, determined factors causing labor turnover and identified possible solutions to labor turnover in the sugar industry. The researcher gathered information through the use of two questionnaires, one for managers of the selected sugar firms and one for non managerial staff. Data was analyzed by use of basic descriptive statistical tools. The study revealed that labor turnover is widespread in the sugar firms and that it affects all categories of staff in these firms. The study also observed that labor turnover is spread throughout the year and that it frustrates and impacts negatively on the sugar firms. The study found that salary is a major factor causing labor turnover followed by training, promotion, performance appraisal and work condition. Other factors like recognition, job content, participation in decision making and leadership style did not feature prominently as causes of labor turnover. Participation in decision making and leadership style has a major bearing in performance of workers and productivity. It was also revealed that although lack of employee commitment and motivation can be major causes of labor turnover, they are dependent on all the other factors causing labor turnover.