

AN EXPANSION OF TOTAL QUALITY MANAGEMENT INTO
THE WHEAT SUPPLY CHAIN FOR THE PREVENTION
OF PEANUT CROSS-CONTACT

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ABSTRACT

Compliance with the U.S. Department of Agriculture wheat flour milling standards and U.S. Food and Drug Administration regulations is not enough to prevent a major recall of wheat flour containing peanut residue that has caused adverse reactions in two children. This thesis expands standard organization-wide total quality management (TQM) principles into an industry-wide perspective. It looks at wheat flour supply chain segments as an interconnected system, working towards the shared aim of providing wheat flour products free from cross-contact with peanuts. Wheat and peanut supply chains are reviewed side-by-side, and TQM tools are used to identify risk and assess cross-contact areas. Regulations and industry best practices are examined for current preventive controls for allergen cross-contact. Recommendations are based on expanded TQM ideologies. This expansion of TQM into the wheat supply chain, while not without its limitations and challenges, can help keep consumer products safe from peanut cross-contact.