

Tia Rosa Bakery of Ohio, Toledo

Intervention Key Words: Tortilla Packaging, Automation

Industry: Bakery, Packaging

Risk Factor(s): Repetitive motion, Awkward Posture- Wrist deviation, High Hand Force- Pinching/Gripping

Situation:

Tia Rosa Bakery is a tortilla manufacturer located in Toledo. Tortilla production involves steps that subject workers to significant risks for Cumulative Trauma Disorders (CTDs), especially during the packaging of the product. After the tortillas are made they are sent down a conveyor to a counting machine. This machine counts and stacks tortillas before sending them to the packaging employees. The workers must take each stack, fold it in half, and then stuff it into a plastic bag. This is performed in eight hour shifts with no job rotation. The repetitive motion and wrist flexion/extension are potential hazards for carpal tunnel syndrome and other CTDs of the wrists, arms and shoulders.

Solution:

In order to alleviate the strain placed on the packaging workers, Tia Rosa purchased an automatic tortilla packaging machine. This machine mechanically packages and seals tortillas, without the intervention of workers, effectively eliminating CTD risk factors. The new machine enables workers to be moved to other areas to assist in other tasks. A total cost of \$50,935 was incurred to purchase the new machinery. Tia Rosa Bakery was awarded \$40,000 from Safety Grant\$ to help offset the costs.



Packaging machine in operation

Results:

- A 94% reduction in CTD Rate (per 200,000 hours worked) was observed in the 24 months following the intervention when compared to the 12 months prior.

- Restricted Days Rate and Employee Turnover Rate decreased 59% and 65% (per 200,000 hours worked) respectively in 2 years following the intervention.
- Risk Factor Scores dropped 56% following the intervention.
- An increase in Lost Days rate was observed but may not be directly attributed to the intervention.