Ergonomic Success Stories presented at Various National Safety Conferences for the Poultry Industry

Tender Grading Bagging Station (2003)

**The Problem**
Employees standing at the end of a tenders grading table put tenders in 10# bags. Poor ergonomic design of the work station resulted in long reaches, excessive bending, and raised arms. This resulted in complaints of shoulder and neck pain, product falling on the floor, decreased production levels, turnover, and poor morale.

**The Solution**
Ergonomics committee evaluated the job and recommended improving the workstation design by raising the table, adding a product flow chute and basket to better distribute tenders going into the bag and moving the job nearer to the deboning line.

**The Benefit**
Employees complaints of pain and difficulty doing the job were greatly reduced. Turnover was reduced and productivity gains were achieved through a reduction in rework. Employees indicated the redesigned workstation was a good improvement. Overall investment paid for itself in terms of productivity gains and cost savings from reduced turnover in less than 4 months.

Front Half Loading Station (2003)

**The Problem**
Employees lift 70# tubs from the filling hopper to a transport conveyor. These lifts involve heavy weight, twisting, and high frequency. This raised concern over potential back strains for employees making the transfer.

**The Solution**
Engineers and committee members designed a flutted conveyor to move tubs from the fill hopper to a perpendicular conveyor system.

**The Benefit**
Implementation of these modifications reduced the potential for back injury while also eliminating the need for one employee in performing the job. Employee feedback was very positive.
Safety Levers on Automated Cut-up Machines (1992)

The Problem
A commercial automatic breast cutup machine design employed safety levers on each side of the feed station requiring the operator to pull both levers after placing the bird top half onto the feed cone before the next cone would advance. This prevented the employee from getting his hand caught in the mechanical feed mechanism and from being pulled into the machine. Unfortunately these safety levers were oriented in such a way as to put mechanical stress on the wrist and palm of the operator and resulted in awkward wrist flexion when the levers were engaged. While no medical complaints had been reported after the machines were introduced, one company had received a few employee complaints of hand and wrist soreness.

The Solution
The two leveler were replaced with two large plastic mushroom-shaped buttons. A different start/stop mechanism was also added.

The Benefit
Workers were able to perform the job with no wrist flexion and minimal mechanical stress to the hand and wrist. One employee commented that the new buttons were “much better” because they put “less pressure on the hands”. The employee also stated that he could now perform the job “faster”. The cost of the new equipment was relatively inexpensive (approximately $60 per machine).
The Problem
A poultry processing plant had problems with employees developing carpal tunnel syndrome. The reported incidence rate plant wide was 9 cases per 200,000 hours. An ergonomic evaluation of trouble spots was conducted to determine the nature of the stresses that could be leading to the problem and a series of controls were implemented along the eviscerating and cut-up lines to reduce these stresses.

The Solution
• The conveyor height was adjusted and platforms provided for short individuals allowing the work to be performed 2 inches below elbow height without stooping or hunching the shoulders and back.
• Forward reaches were limited to 18 inches and the work oriented no closer than 6 inches from the workers body to promote sound body mechanics.
• One-inch thick rubber pads and foot rests were provided at standing and sitting workplaces to reduce pressure on sensitive areas of the body.
• Three control measures were added relative to knife use that included: sharpening schedules, a means of removing grease from knife handles, and a training program on cutting techniques.

The Benefit
Due in part to these engineering and administrative controls, the company was able to reduce the incidence of carpal tunnel syndrome in a five year period from 9.0 to 3.0 cases per 200,000 work hours, a 70% reduction.