Granrud's Lefse Shack

Montana Manufacturing Extension Center

Creativity and Automation Solve Worker Shortage at Granrud's Lefse Shack

Client Profile:
Granrud's Lefse Shack, founded in 1977, manufactures lefse, a Norwegian potato bread similar in appearance to a tortilla. The product has grown in popularity as a wrap and is available in all 50 states. The plant in Opheim, Montana produces 47,000 one-pound packages of lefse per season. Granrud's employs 10 people.

Situation:
Before purchasing the business, Granrud's co-owners, Twyla Anderson and Alice Redfield, worked with the original owner to see if a new production building would be feasible to replace the existing building known as 'The Shack.' The Montana Manufacturing Extension Center (MMTC), a NIST MEP network affiliate, were contacted to help with the feasibility process and, along with several third-party experts, designed a new layout to make the manufacturing process flow better and become more efficient. The high cost for a new building did not deter the would-be owners from continuing with the purchase. Instead, they took an entrepreneurial approach to improve productivity and increase sales by working with MMTC to explore solutions to a workforce shortage and build in efficiencies.

Solution:
MMTC and Granrud's owners identified a production bottleneck with the mechanical rolling machines. Daily output was limited because a person was required to run each machine and advance it manually when a piece of lefse was rolled to the 'perfect' size. Four machines required four workers, and quality and uniformity were affected when fatigue or distractions occurred. On MMTC's advice, a pair of machines was automated using programmable logic controls (PLCs) to automatically roll out a piece of lefse to the right size, eliminating the use of a foot pedal and using a computer eye to sense when the lefse rotated. Once this automation had proven successful, the owners decided to automate the remaining machines. This enabled one person to load two rolling machines, cutting the labor requirement for this production step from four to two. It also sped up the process by standardizing the rolling time and helped reduce fatigue. At the same time, funds from Montana's Agro-Energy Plan WIRED (Workforce Innovation in Regional Economic Development) were used to produce a training manual for the machines and train workers on their operation and maintenance, adding critical documentation on how to do programming changes in the software if needed.

Results:
* Increased production by 100 additional packages a day.
* Increased productivity by 25 percent.
* Retained 14 workers.

Testimonial:

"The Montana Manufacturing Extension Center staff has really been good to work with. We have received lots of help and ideas from them. They are very interested in our business and wanted us to succeed."

Alice Redfield, Co-Owner