

Washington grows more hops than any other state in the US. After hops are cut and dried, they are typically compacted into large bales for transport.

The powerful presses that form hop bales pose a significant injury hazard to workers if safety procedures aren't followed.

Workers suffer crushing injuries in hop balers

Incident 1:

A three-person crew was working the night shift baling hops. Two workers were operating the hop baler, and the third was loading hops onto a conveyor in another room.

The hydraulic baler pressed hops into 200lb bales, one at a time. To operate the baler, the two workers needed to use the controls on either side of the machine at the same time. This kept the workers away from moving press parts during the compaction cycle. Sacks were attached to sharp points on the machine with each cycle to package the hops. The workers then removed the bale and sewed the sack shut by hand.

About four hours into the shift, the third member of the crew, who had been working in another area, was assisting the two workers at the bales. As the two workers activated the press, the other worker reached in to quickly adjust the bale sack. His arm was caught between the moving metal parts of the machine and broken.

Incident 2:

Another worker was severely injured just two weeks later, under similar circumstances. A three-person baling crew was working the night shift. At least one of the workers was new to the hop bailing process.

All three men on shift were working together at the bailer press. As two workers activated the press, the third reached in to adjust the bale sack. His arm was also caught between the parts of the press as it lowered. He suffered a traumatic hand amputation, forever changing his life.



"STAY CLEAR WHEN IN OPERATION" is clearly marked on the hop baler in both English and Spanish.



Control panel located on one side of the hop baler.

Recommendations

Operation

- Ensure that all workers are clear of moving press parts before starting a baling cycle and during operation.
- Restrict access to the baler operating area to authorized workers when in use.
- Perform spot-checks to make sure safe work practices are being used, including during night shifts.

Plan for Safety

- Require all baling workers, including those on night shift, to hold pre-shift safety meetings to discuss hop baling safety hazards and how to address them.
- Create a Job Hazard Analysis (JHA) for each operation. If changes in the work plan occur, stop to identify any new hazards and update the JHA. Whenever possible, include workers in JHA development.
- Contact your hop baler manufacturer and ask about installing additional guarding, interlocks, sensors, or other safety features to prevent crushing injuries.
- Pay workers an hourly wage instead of on a piece-rate basis. Workers paid piece-rate wages may try to work faster which could lead to unsafe practices. Using an hourly wage system allows workers to make safe choices without affecting their pay.

Training

- Employers should provide workers with comprehensive training in safe baling methods before assigning them to operate, clean, service, maintain, or repair hop balers.
- Training should be documented and provided in the language best understood by the worker.

Requirements

Safe Place Standard

- The following are prohibited: See [WAC 296-307-045](#)
 - Removing, displacing, damaging, destroying or carrying off any safety device, safeguard, notice or warning intended for use in any place of employment.
 - Interfering in any way with the use of any safety device, method or process adopted for the protection of any employee.

Reporting

- Employers are required to contact DOSH within 8 hours of a workplace fatality or in-patient hospitalization of any employee and within 24 hours of a non-hospitalized amputation or loss of an eye of any employee. See [WAC 296-27-031](#)

Resources

Safety Standards for Agriculture, Chapter 296-307 WAC:

<https://app.leg.wa.gov/wac/default.aspx?cite=296-307>

Hops Baler Hazards (L&I):

<https://lni.wa.gov/safety-health/preventing-injuries-illnesses/hazardalerts/HopsBaler.pdf>

American National Standard: Baling Equipment–Safety Requirements for Installation, Maintenance, Modification, Repair and Operation (ANSI Z245.5-2013): <https://webstore.ansi.org/standards/eia/ansiz2452013-1506110>

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lni.wa.gov/safety-health/preventing-injuries-illnesses/request-consultation/