

Grape Picker Run Over by Bin Trailer, Breaks Leg¹

California NURSE Project²

SUMMARY : CASE 191-011-01

Grape pickers were riding from the vineyard to the road on bin trailers. These trailers are pulled by tractors and carry big bins of grapes. The riders stood on the three or four inches between the bins and the edge of the trailer, hanging onto the bins. The morning was foggy and the trailer surface was wet and slippery. One worker fell off and the trailer wheel rolled over and broke his left leg.

The foreman and crew picked the worker up, carried him to a truck and drove him eight miles to a hospital. Moving someone with a badly broken leg can be as dangerous and painful to the victim as the injury itself. The worker was in the hospital for many days, and had at least two operations on his leg.

How could this injury and what followed have been prevented?

- Do not ride on equipment which is not designed to carry people.
- Employers should explain and enforce field safety rules every day.
- Every field work team should have a person certified in first aid.
- Work crews should have a cellular phone or radio available to use for contacting emergency medical services.

BACKGROUND

On November 4, 1991 a small rural hospital emergency department reported an agriculture-related injury to NURSE project staff, using a FAX reporting form developed by the NURSE project. This injury occurred at a vineyard in California on October 31, 1991. A seasonal grape picker was riding on a bin trailer from the field back to the roadway when he fell off and was run over by the wagon wheel. A nurse from the NURSE project interviewed the injured worker while he was still hospitalized on November 8, 1991, and on December 5, 1991 a Senior Safety Engineer from the NURSE project conducted an on-site investigation and discussed the incident with the farm manager. The employer did not notify Cal/OSHA, subsequently no Cal/OSHA investigation was conducted.

The farm where the incident occurred is part of a family-owned corporation which has approximately 1,000 acres; half planted in grapes and the other half in tree fruit (e.g. peaches, nectarines, etc.). The farm is a full-time operation managed by family members with the usual seasonal fluctuations of personnel and activities. The company employs approximately 35 full-time employees (employed at least 38 weeks per year), 75 seasonal workers (employed 13-37 weeks per year), 37 casual workers (employed 1-12 weeks per year), and 3 family members. During harvest time there is high labor demand and the farm hires seasonal workers to harvest the fruit.

The Senior Safety Engineer reviewed the company safety and health program and found that it addressed the seven points included in the Title 8 California Code of Regulations 3202 Injury and Illness Prevention Program, but that the written program had not been in place at the

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2. NURSE Project, California Occupational Health Program, 2151 Berkeley Way, Annex 11, Berkeley, CA 94704.

time of the incident. (As of July 1, 1991 the State of California requires all employees to have a written seven point injury prevention program: designated safety person responsible for implementing the program; mode for ensuring employee compliance; hazard communication; hazard evaluation through periodic inspections; injury investigation procedures; intervention process for correcting hazards; and a health and safety program.)

INCIDENT

On October 31, 1991 at approximately 9:20 a.m. a 23 year old male Hispanic grape picker received an open fracture of his left tibia when he slipped and fell from the grape bin trailer he was riding on and the trailer ran over his leg.

At this vineyard the wine grapes are picked and placed in large bins which are transported through the vineyard by a large trailer pulled behind a tractor. When the bins are full the trailer is pulled to the roadside and a forklift is used to load the bins on to a waiting trailer and truck combination. A bin trailer is a narrow (six feet wide) flat bed trailer designed to carry two or three of the four foot square bins down the center of a row in a vineyard. The available space from the edge of the trailer to the bins is approximately three to four inches wide. Riding on the bin trailers to and from the fields is a common practice for employees.

The weather was foggy at this time in the morning which made the metal surfaces of the grape bin trailers wet. The injured worker was riding on the side edge of the bin trailer and holding onto the wall of the bin by hand when he slipped and fell off. The trailer then rolled over his left leg.

The field foreman had the injured worker picked up, carried to a pick-up truck and transported 8 miles to the nearest rural hospital emergency department (which subsequently reported the injury). No first aid was administered in the field and no ambulance was called.

The injured worker arrived at the emergency department at 9:45 a.m. and was treated for a comminuted, open fracture to his left tibia and abrasions to his abdomen. At this time his leg was splinted, an IV was started, and pain medication (morphine) was given. Approximately 3 hours later, after he was stabilized, he was transported to an orthopedic hospital approximately 40 miles away for evaluation and surgical reduction of the fracture. He was subsequently discharged but because of continuing pain he went to a small district

hospital emergency department. He was later admitted to a level 2 trauma center for further evaluation and surgery. At the time of the interview by the nurse he had been hospitalized for a total of 9 days.

PREVENTION STRATEGIES

1. Workers should not ride on moving equipment which is not designed for transport. In this incident grape pickers rode on the bin trailers to get to the road, instead of walking back through the vineyard. The bin trailers are not designed for this purpose. If the grape picker had not been riding on the bin trailer he would not have fallen off and had his leg run over.
2. There was no written safety program at the time of the injury although by the time of the investigation the employer had developed a written program. The written program covers the seven points required by Title 8 California Code of Regulations 3203 Injury and Illness Prevention Program. If there had been an enforced written program the worker would not have been allowed to ride on the bin trailers and his injury would have been prevented.
3. The employer must provide adequate training of seasonal and casual employees. Although unsafe field activity such as riding as a passenger on the bin trailer or tractor was part of the verbal safety program at the time of the incident it was not enforced. Employees need to be instructed daily about field safety rules such as not riding the trailers back to the road and the rules must be enforced.
4. There should always be a person certified in first aid on a field work team*. In this incident a worker was inappropriately moved and transported without any first aid. If the foreman or another person at the scene had been trained they would have been able to administer first aid and would have known that this was a severe enough injury to call for paramedic help. If first aid had been given the risk of complications from the injury might have been reduced. * **Title 8 California Code of Regulations 3400 (b): "In the absence of an infirmary, clinic or hospital, in near proximity to the workplace.. a person or persons shall be adequately trained to render first aid."** Title 8 California Code of Regulations 3439 (b): **"There shall be at least 1 employee for every 20 employees at any remote locations with training for the administering of emergency first aid."**

5. Work crews should have a cellular phone or radio available in vehicles to contact the Emergency Medical Services. In this incident, the foreman should have called 911 before moving the injured worker. Because the worker did not receive appropriate first aid in the field, he was at greater risk of bleeding and further injury. There was also a possibility for the open wound to become contaminated without proper first aid. The grape picker was in considerable pain and hyper-ventilating when he arrived at the emergency room. If 911 had been called, his leg would have been splinted by trained EMS personnel at the scene of the injury, thereby stabilizing him before transport to the hospital.

FURTHER INFORMATION

For further information concerning this incident or other agriculture-related injuries, please contact:

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The NURSE (Nurses Using Rural Sentinel Events) project is conducted by the California Occupational Health Program of the California Department of Health Services, in conjunction with the National Institute for Occupational Safety and Health. The program's goal is to prevent occupational injuries associated with agriculture. Injuries are reported by hospitals, emergency medical services, clinics, medical examiners, and coroners. Selected cases are followed up by conducting interviews of injured workers, co-workers, employers, and others involved in the incident. An on-site safety investigation is also conducted. These investigations provide detailed information on the worker, the work environment, and the potential risk factors resulting in the injury. Each investigation concludes with specific recommendations designed to prevent injuries, for the use of employers, workers, and others concerned about health and safety in agriculture.