

Health and Safety Executive		Sector Information Minute	
Agriculture and Food Sector			
		SIM 1/2003/06	
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Target Audience:
FOD Inspectors inspecting agriculture

FLEECE AND ROPE WINDING MACHINES

This SIM draws Inspectors attention to the safeguards required for this class of equipment in the wake of a double fatality. It sets out the main considerations to prevent people becoming entangled in the reel.

BACKGROUND

1. A horrific incident occurred at a soft fruit farm where raspberries were grown in rows under polytunnels. The tunnels were of a typical design consisting of a metal framework, over which the plastic cover was secured by sheeting rope which zig zagged along the length of the tunnel over the top of the plastic covers. As part of the tunnel dismantling process the sheeting rope (often hundreds of metres in length) had to be wound onto a shaft for future use. During this rope winding process the two workers involved became entangled in a winding machine and were both killed.
2. The rope was being wound on to a hydraulically powered mechanism fitted to the three point linkage at the rear of a tractor; similar machines are used for winding fleece which is used to cover/protect some crops. This SIM is directed at powered machinery used for winding rope and/or fleece with the tractor stationary.
3. The SIM does not apply to winding machines which are used with the tractor being driven along whilst the reel winds on the material. These machines are only used by one person and as the tractor is in motion the risk of entanglement by the operator is very greatly reduced.

DETAILS

4. There are a number of manufacturers of machines similar to that involved in the accident. Those that are known to HSE have been contacted and the contents of this SIM discussed with them.

5. There are however likely to be a significant number of home-made and bespoke machines in existence and in use. The requirements of this SIM applies to all machines regardless of origin.
6. These machines are only used for a limited period during the year and are likely to be found at large fruit or vegetable farms.
7. **Points to be addressed by the manufacturers/users:**
 - a. Winding speed should not exceed 1.4 m/s. As the reel takes on rope/fleece the winding speed will increase as the circumference of the reel grows. This needs to be taken into account when calculating the maximum winding speed.
 - b. A trip device should be positioned so that any person being drawn into the reel by the rope/fleece will make contact with it. Resetting the trip device must not allow the reel to start up without another separate action by the operator.
 - c. The machine must come to rest before any person who has made contact with the trip device becomes entangled in the reel. Consideration of the worst case (i.e. a full reel) should be taken into account and depending on the distance of the trip device from the reel - a brake may be required to bring the reel to rest in time.
 - d. Any feeding device or hoop must not create a trapping point.

8. Additional points to be addressed by users:

Safe systems of work and appropriate training must be implemented when using this equipment. This is particularly important if casual staff are being used to carry out this task.

ACTION BY INSPECTORS

9. When advising users/manufacturers of these machines inspectors may wish to refer to the above list of requirements when considering whether the risks of entanglement have been addressed.
10. Ensure any other hazards are also adequately addressed e.g. shear points between the reel and the winder frame and that controls are suitably marked.
11. In situations where manufacturers or users claim compliance with the above requirements is not reasonably practicable local SG and sector assistance should be sought to establish an acceptable alternative.