BioSecure
Enhanced and cost-effective biosecurity in livestock production

Animal Data Analytics

PRACTICE ABSTRACT #36

Loading docks: critical gateways for disease prevention during animal movements

Loading docks are critical biosecurity interfaces because they concentrate animal flow, vehicle contact, equipment handling and staff movements at the boundary between the farm and the external environment. During loading and unloading, the dock should be managed as a high-risk, one-way transition point rather than as a routine internal area.

The objective of this practice abstract is to identify high-risk biosecurity interfaces during animal movements and provide practical recommendations to reduce disease transmission.

- **The movement database analysed 105,200 records; 17,244 movements were non-secure (Risk or Unsafe) representing 16.4% of the total.**
- **All non-secure movements started in zones classified as dangerous, and all unsafe movements occurred in dangerous-to-dangerous transitions.**
- **The loading dock was the main risk-origin zone, with 2,450 risky movements and a 95.5% risk rate.**

To quantify the role of this interface, origin-destination movements were evaluated according to zone type, zone status and movement-risk classification. The single highest-risk route was loading docks to farrowing areas, with 1,514 risky movements out of 1,515 (99.9%). Movements from loading docks to nursery/piglet areas were all classified as risky (1,427/1,427; 100%).

These figures indicate that loading and unloading may create a direct bridge from dangerous areas to vulnerable production units.

Trucks, ramps, panels, boots, gloves, sorting boards and residual organic material can act as fomites; animals moved through the dock may also carry contamination back into internal corridors, if staff or animal flow is reversed.

Improving this point helps farmers reduce external biosecurity breaches during animal movement, protect highly susceptible groups and focus cleaning, disinfection and supervision where a failure would have the greatest epidemiological consequence.

Focusing on loading docks as critical control points can significantly reduce disease introduction into farms.



- Establish a clean-dirty line at the loading dock: drivers should remain on the truck side, and farm staff should not enter the vehicle. Use dedicated boots, gloves, and handling equipment.
- Implement a one-way loading/unloading flow, moving from clean areas towards the dock. Do not return to sensitive areas without completing the full biosecurity protocol.
- Clean, disinfect, dry, and document the dock, ramps, gates, and equipment after each use. Schedule these activities at the end of the work sequence whenever possible.

www.biosecure.eu

Funded by the European Union

Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the Research Executive Agency (REA). Neither the European Union nor REA can be held responsible for them.