

Recommendation on a method designed to assess the health status of delivery trucks

In the late 1990s, a committee of industrialists and quality experts developed a trial method for checking controls on the critical recontamination point as represented by delivery trucks during the transportation of heat-treated products (HTP).

At a time both when the level of prevention relating to biosafety in the animal nutrition sector clearly needs to be increased to counter the arrival of viruses, and when public authorities are demanding stronger measures to prevent the spread of Salmonella, it is useful to remember the proposal issued in I'Doc S11. The method is given here for information only; its use is not mandatory. If, however, this method is not used, the committee strongly recommends that each company should establish its own system in order to strengthen control over this potential route for transmission.

Each company is responsible for setting up an effective inspection method and the related procedures (who does what, when and how). While the committee proposes a method, it cannot set out the detailed implementation procedures

1. Proposed inspection method

It is recommended that the inspection method should cover three levels of risk :

- risk relating to transported products
- risk relating to condition of the equipment
- risk relating to deposits found both inside and outside trucks.

This may be done using an overall assessment form, an example of which is given below. This overall assessment form profiles each truck in terms of the risk of recontamination of HTP. There is no requirement to carry out all the planned inspections with the same frequency, particularly those involving equipment and deposits.

The committee has developed both this form and the technique used to assess inspection results. The committee also proposes corrective measures based on these results.

Based on the assumption that incorrect cleaning evidenced by the presence of crusts or clumps of material automatically implies the possible presence of large quantities of bacteria likely to contaminate HTP,

the committee does not recommend using regular microbiological checks for health monitoring of trucks. Depending on the needs and desires, the proposed method may be used to assess a truck's health status. These inspections can be carried out prior to cleaning in order to assess a truck's health status, and after cleaning to assess the method's effectiveness.

1.1. Risk relating to transported products

To the left of a chart identifying the relevant truck and related inspection, a table lists the type of product carried by the truck.

If the truck always carries the same type of product, the risk is structural and derives from the way the truck is used. This may require cleaning regimes that increase in proportion to the perceived level of risk of the products carried in addition to HTP. The selected regime will be marked in the relevant box.

In increasing order of risk, products considered at-risk are :

- pellets and crumbs.
- untreated meals.
- raw materials and reprocessed products.

It is strongly advised not to transport HTP in trucks used to carry raw materials and reprocessed products. However, if this is unavoidable due to a limited number of available trucks, it is recommended to adapt cleaning regimes to suit the level of risk incurred. This could mean cleaning a truck prior to loading HTP should that truck have been used to carry raw materials or reprocessed products since the last cleaning operation.

1.2. Risk relating to equipment condition

The proposed method consists in selecting 8 items from the following list, depending on the equipment fitted on the truck :

- Tarpaulin
- Container interiors
- Container hatches
- Floor system
- Perpendicular screw

- Vertical screw
- Access hatch at the base of the vertical screw
- Access hatch to the hopper that links to the reclaim screw conveyor
- Pit dump hatch
- Chute extension

- Chute channel

The controller has to examine each selected zone and check the corresponding boxes. The calculations given at the bottom of each column give a score that can be used to provide a corrective measure (Table 1)

1				
2				
3				
4				
5				
6				
7				
8				
Multiplying factor	x 0	x 1	x 2	x 6
TOTAL	O+	+	+	=

The suggested method of interpretation is as follows: if the total score is greater than or equal to 6: the truck may not carry HTP loads until the equipment has been made conform.

The committee proposes that trucks scheduled to carry HTP should be inspected on a quarterly basis; this frequency could be revised in accordance with the equipment's condition.

1.3. Risk relating to the presence of deposits

The committee suggests that this inspection should initially be made once a quarter, with the option of modifying the regime according to the results.

The committee also recommends that, in the first instance, these inspections should be carried out prior to cleaning the trucks in order to accurately assess the effect of the cleaning frequency. After this, the inspections could be performed randomly. This inspection must be carried out with the truck empty. There are two separate inspection forms - one for truck interiors and one for exteriors.

The method involves examining each zone and checking one or more corresponding boxes. The types of deposition that may occur are :

Powdery deposit: powdered product or dry dust that can easily adhere to fingertips.

Dry crusts: dry deposits stuck to the side wall, created by product accumulation.

Wet clumps: wet or fatty deposits adhering to the side wall, created by product accumulation.

Corrective measures are tailored to fit the results from each zone and are indicated by letters.

For external zones :

R: Absence of deposits

NU: Subsequent cleaning: pay attention to this item at the next cleaning operation

AN: Truck stoppage: immediate cleaning of the contaminated area: pay attention to this item at the next cleaning operation: modify the cleaning procedure where necessary.

External zones	No deposition	Slight powdery deposition	Large quantity of powdery deposition	A few dry crusts or a few wet clumps	Large quantity of dry crusts or large quantity of wet clumps
Gangway floors and along the length of the tarpaulin(s)	R	AN	AN	AN	AN
Base of the truck's rear body	R	R	R	NU	AN
Chassis	R	R	R	NU	AN
Wheels and mud flaps	R	R	R	NU	AN
Outside of the tipper	R	R	R	NU	AN
Driver's cabin	R	R	R	NU	AN

For internal zones :

- P : Search for causes of large accumulations of dust.
- RN : Increased cleaning and disinfection regime and, where necessary, extra inspections.

- H : Search for and elimination of sources of moisture.
- AN : Truck stoppage: immediate cleaning of the contaminated area: pay attention to this item at the next cleaning operation: modify the cleaning procedure if necessary.

Internal zones	No deposition	Slight powdery deposition	Large quantity of powdery deposition	Presence of dry crusts	Presence of wet clumps
Top part of inter-container partitions	R	R	P RN	H RN	H AN RN
Container tops	R	R	P RN	H RN	H AN RN
Container bases, hatches and actuators	R	R	P RN	H RN	H AN RN
Chute channel and extension	R	R	P RN	H RN	H AN RN
Tarpaulin in contact with container interiors	R	R	P RN	H RN	H AN RN
Base of the vertical screw	R	R	P RN	H RN	H AN RN
Pit dump hatch and the cleaning hatches	R	R	P RN	H RN	H AN RN
Transversal screw	R	R	P RN	H RN	H AN RN
Internal linking hoppers (with pneumatic system, reclaim screw conveyor, etc.)	R	R	P RN	H RN	H AN RN

2. Conclusion

A method has been developed to manage the critical point represented by delivery trucks in relation to heat-treated product recontamination hazards. The method consists in a series of preventive measures, an inspection procedure and a number of corrective measures. This is a practical method developed by professionals in the animal feed sector and can

be easily applied by any company. It is designed to provide technical support for overall investment in healthy products in relation to salmonella and takes account of the whole heat treatment production circuit at farms, including loading and transport operations.

3. Delivery truck health inspection form

TRUCK IDENTIFICATION

Date of the inspection / / - n°	Tipper truck vehicle registration
Date of previous inspection / / - n°	Date of latest cleaning operation / /
Name of the controller	Name of the driver

PRODUCTS CARRIED ON THE TRUCK

Heat-treated products
Pellets or crumbs
Untreated meals
Raw materials or reprocessed products

4. Condition of the equipment

Examine each zone and **Check** the corresponding boxes, then **Count** the crosses in each column and **multiply** by the column's corresponding coefficient

Tarpaulin				
Container interiors				
Floor system				
Vertical screw				
Access hatch at the base of the vertical screw				
Pit dump hatch				
Chute extension				
Chute channel				
Multiplying factor	x 0	x 1	x 2	x 6
TOTAL	O+	+	+	=

5. Deposits

Examine each zone and **Check** the corresponding box.

Zones extérieures	No deposition	Slight powdery deposition	Large quantity of powdery deposition	A few dry crusts or a few wet clumps	Large quantity of dry crusts or large quantity of wet clumps
Gangway floors and along the length of the tarpaulin(s)					
Base of the truck's rear body					
Chassis					
Wheels and mud flaps					
Exterior of the tipper truck					
Driver's cabin					

Zones intérieures	No deposition	Slight powdery deposition	Large quantity of powdery deposition	Presence of dry crusts	Presence of wet clumps
Top part of inter-container partitions					
Container tops					
Container bases, hatches and actuators					
Chute channel and extension					
Tarpaulin in contact with container interiors					
Base of the vertical screw					
Pit dump hatch and the cleaning hatches					
Transversal screw					
Internal linking hoppers (with pneumatic system, reclaim screw conveyor, etc.)					