

LOADING DOCK

The purpose of this paper is to establish shipping procedures of slaughter and reform pigs in a vision of health protection of pig farms. It is now recognized that the transport is a significant risk for contamination of a porcine farm and this risk repeats at regular intervals. Since producers have generally little direct control on the biosecurity of the transport vehicles accessing their production sites, it is important to establish clear rules of biosecurity for loading pigs and build loading docks which allow a sanitary barrier between the contaminated zone (the truck) and the area to protect (the farm).

First and foremost, it is important to chose a serious carrier who is aware of risks that he represents for the farm which is his client. The carrier and his employees have to comply in a voluntary way with the current rules on every production site. In this respect, the minimal rules should be the following ones:

- 1- Any time, the transport vehicle should have been washed, disinfected and dried up correctly after its last use. The rule also applies to the truck cab.
- 2- The transport vehicle should never contain pigs or other animals when visiting a production site, unless there is a known sanitary link accepted by the producer (ex: two production sites belonging to the same production system) or if the sanitary status of animals already in the truck is higher than those of the site where he has to load pigs.
- 3- Upon their arrival at the farm, the carriers, have to dress coveralls and clean boots. If the design of the loading dock makes that they have to penetrate inside, they must go through a Danish corridor procedure of which will be described later in the present document. If, instead, the facilities make that they remain outside, wearing disposable gloves will still be required.
- 4- In case of one or some of the previous rules were impossible to implement properly, the use of a transfer vehicle to avoid that the transport truck approach of the farm would be an acceptable alternative as far as the farm would be provided with equipments to wash, disinfect and dry up adequately this vehicle between the uses even in the cold season.

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Secondly, the loading dock must have been designed to become a sanitary physical barrier between the transport vehicle and the farm. It must:

1. Be easy to wash and to disinfect, both in warm season and in winter. It must be isolated and closed with tight doors, both towards the farm and the transport vehicle. We recommend the use of doors with vertical opening (garage type), at least for the transport truck side.
2. The floor should be covered with concrete and if a slope is necessary, it should be rising and at most in 20 degrees to facilitate loading. The floor must ensure an adequate adhesion to prevent injuries both to pigs and human who work on it. A drain or a small pre-pit must be planned to receive the residues of washing and disinfection. These residues considered contaminated should be forwarded directly in the pit by a pump. If it was impossible, a transfer in the pre-pit of the farm would be the preferred alternative. If a transfer via a pump was impossible, residues should be forwarded by a drain in a dalot of the farm, under slats. Obviously, we aim at not using litter or only few in order to facilitate the wash and the disinfection and avoid flow problems of residues.
3. it is essential to establish a line not to cross, both by the staff of the farm and by the carrier. This line should correspond to a physical barrier as a door or a gate. This line becomes the boundary between the farm and the loading area considered to be contaminated by the fact that foreigners penetrate into.
4. The loading dock should be designed to facilitate flow of pigs. The lane loading should not exceed 0.91 meters wide (Jordès Andès Corréa's recommendation) so as to allow the simultaneous passage of no more than two pigs. It can be however separated in two, on the length direction, by an openwork barrier. This addition makes impossible any turn for the pigs once engaged in the corridor of loading ramp. It is imperative to avoid angles in 90 degrees and the zones of shrinkage in funnel. These configurations make loading more laborious because the pigs will tend to stop advancing. The corridor has to have solid walls and without sharp projections besides and be well enlightened. We should aim at a level of lighting similar or slightly upper to that from the inside of the barn. Walls, ceiling, floors and barriers should be made by the same materials as the barn itself so that they do not become sources of distraction or stress to the pigs to be manipulated.
5. The loading dock must be equipped with a heating unit powerful enough to dry it up quickly after the washing and the disinfection and to prevent freezing between uses. It has also

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to allow a minimum of comfort if animals have to remain there a certain period of time between entry in this section and the transfer to the truck.

6. During the loading, the load out area should be positive pressure ventilated with air coming from inside the farm. It will avoid a potentially contaminated air suction from the truck towards the barn and will facilitate the load of the pigs by eliminating the sensation of airflow in the opposite direction of their displacement. On the other hand, during an unloading the use of the ventilation is not necessary since the air which could infiltrate into the barn from the truck will not be more contaminated than the pigs coming in. Even there, fact for the pigs not to feel a draft in the opposite direction to their movement will help unloading. Like when loading, the boundary line between the suspected contaminated area and farm zone must be respected by both the carrier that the farm staff.

7. Ideally, the loading dock should be equipped with a air cushion allowing the truck to have direct contact with the loading deck without using an outside gateway. This equipment reduce the air flow into the dock by the outer winds and facilitate the loading of pigs reducing glare in sunny weather period time.

8. It is essential to provide the loading dock of barriers forbidding any return of pigs from the truck towards the farm. To eliminate any risk it occurs, the producer has to load his pigs by small groups, question to insure pigs continuous stream towards the transport vehicle.

9. The outside door of the loading dock must be closed and locked at all time so that nobody or any domestic, wild animal or bird can not enter between the uses.

10. A visual or sound device should be installed to warn the staff of the farm of the carrier's arrival.

11. The area where the truck will have to park during the loading should be free of muddy or water accumulation zones . The wet zones remain contaminated longer and constitute a risk for the staff of the farm. It would thus be important that the zone of load is well drained, on gravel and ideally on concrete.

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12. The loading dock would preferably be fitted out at the end of the building. In the case of a very long building or if the relief does not allow to built the quay at the end of the farm, this one could be placed in the middle of the building on the ventilators side, but designed so that the transport vehicle parks perpendicularly in the farm to avoid any proximity between the pigs of the farm and the animals which could be already in the truck when it arrived on the production site.

13. In the case of designing an outdoor loading ramp where an outside footbridge would be used, we should consider its orientation with regard to prevailing wind at the time of deciding on its place. Indeed, it is desirable, that the wind does not blow directly inward of the quay during the opening of doors.

14. A small pen should be available to put in the weakened but ambulatory animals, the goal is to separate them from normal pigs and be able to load them at the convenient moment.

15. Working tools supplied by the farm should be available in this room. This should include sound pallets, loading whips, panels or any other equipment suitable for handling all types of pigs in transit through the loading dock. It is important to avoid the use of the electric prickles. All the strong noises or the shouts also are to be avoided during the movement of animals.



EXAMPLE OF LOADING DOCK

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Operating mode of loading ramp

The loading procedure should plan that at no time, both doors of the loading dock (that of the farm and that of the truck side) are opened at the same time, preventing a movement of air of the truck inward of the farm. Upon his arrival, the carrier warned the staff of the site by the device provided for this purpose. They can then go unlock the doors of the loading dock. The carrier at that time put on some disposable boots crossing the threshold of the front door of the loading dock, removes his coveralls and coat if necessary, crosses the Danish corridor having removed his shoes always covered with disposable boots where he washes and disinfects his hands adequately and after that dress coveralls, disposable or cotton gloves and boots supplied by the farm. Failing to have water available, the use of disinfecting solutions without water is a minimum and acceptable alternative. However, wearing gloves is always requires. The carrier can then move into the area reserved for him.

The farm staff bring then a group of pigs towards the loading dock, open the barn side door of the quay and enter the pigs in it, close the door behind them, lead the pigs to the contaminated zone but without penetrating there themselves. Once the pigs confined in the contaminated zone, the farm staff can return to the barn and close the door of the farm side of the quay behind them. The staff of the carrier take then the group of pigs in charge, open the side truck door of the quay and loads the pigs in the transport vehicle. Once finished, the carrier staff closes the truck side door of the quay and wait for the next group of pigs. The same procedure is repeated until the load of animals is completed. According to the model of quay, the type and the number of pigs to transport (sows, piglets or slaughter pigs), it is possible that the staff of the farm has placed all the pigs in the loading dock before carrier arrival. This procedure, when possible, greatly speeds up the loading time and reduces the risk of contamination since the farm side door of the dock will never be opened during loading.

Once the loading operation is finished, the carrier removes farm boots, gloves and coveralls, puts down them in the contaminated zone of the quay, washes and disinfects hands again, dress his coveralls and shoes then leaves the loading dock by locking the truck side doors behind him leaving. Once outside, this one removes the disposable boots which cover his shoes and deposit them in an outside trash can planned for this purpose. If he has documents to be left on the site, he deposits them in a mailbox placed on the outside wall of the loading dock.

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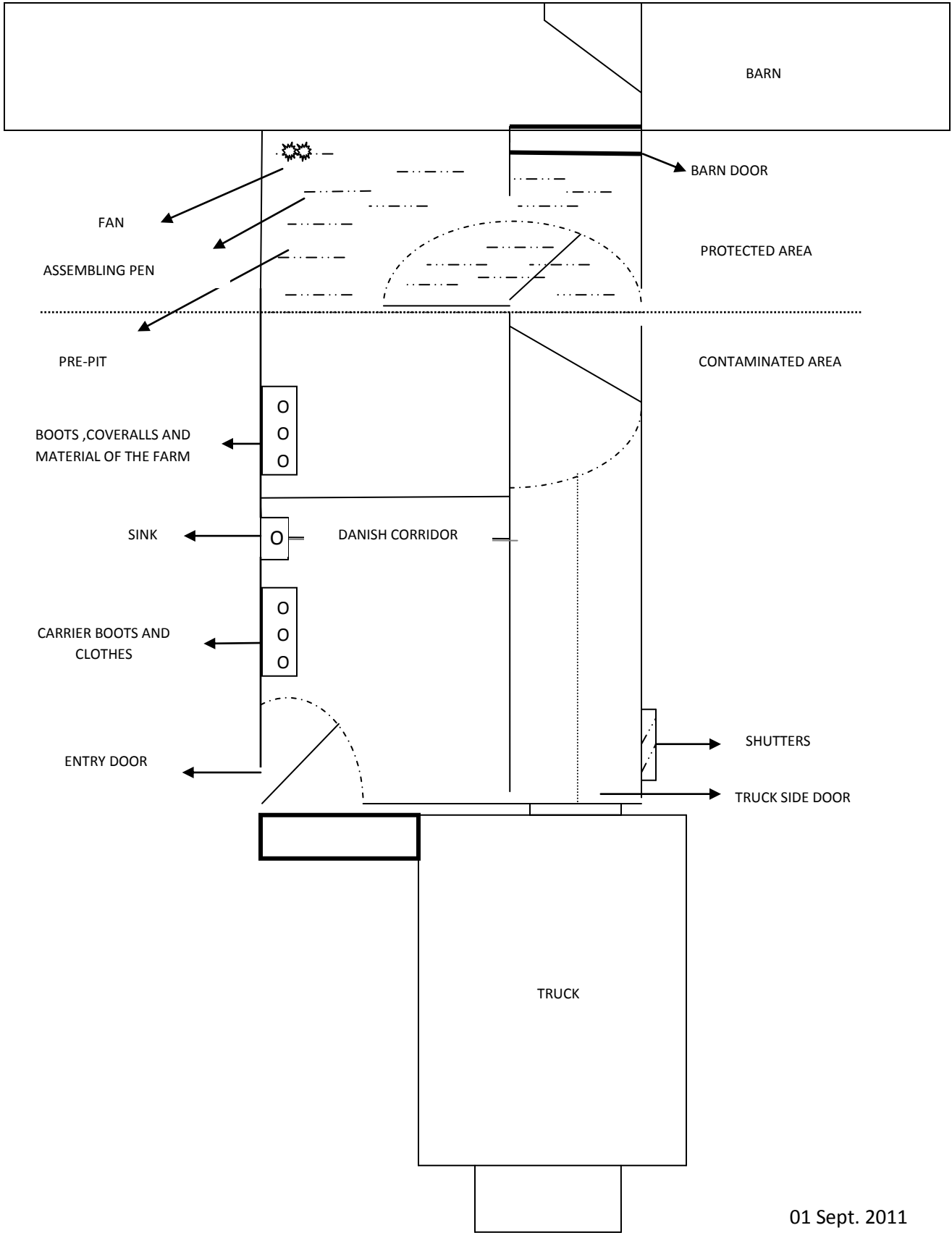
Exit procedure of carcasses and other residues of the farm

The ideal situation would be that carcasses, placentas and the other residues intended for rendering be put out by a different place from the loading dock so that the staff of the farm frequents the least possible the zone where vehicles potentially contaminated circulate and to prevent that carcasses be present in the quay when loading of pigs. However, in very great majority of the cases, the loading dock is a convenient place by where to take out dead pigs and/or containers. Once disinfected and dried up, the staff can thus deposit dead animals in the loading dock and retrieve them from the outside at the end of the working day without penetrating into the dock or simply pushing carcasses outside without themselves going out of the building. In fact, the situation to ban would be to drag carcasses outside and thus to walk on the ground around the loading ramp and then to return in the protected area.

The design of the loading dock is therefore an important link of the biosecurity program of a farm. It is important to remind that the contamination of a production site can be very expensive and possible by inadequate procedures of entry and exit of animals, material or equipment.

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IDEAL LOADING DOCK PLAN

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