

Transmission of PRRS virus

At this time, a number of PRRS eradication efforts have been established and tested throughout numerous pig-producing countries in the world. Methods such as whole herd-depopulation/repopulation, test and removal, herd closure and rollover programs, and the production of negative pigs from positive sows have all been shown to be successful. While each method has both advantages and disadvantages, the biggest challenge the swine industry currently faces is “sustainable eradication”, due to the fact that many PRRS-negative farms have become re-infected over time, often through unidentifiable routes, particularly during periods of cold weather.

At this time, transmission of PRRSV has been demonstrated experimentally by the following routes:

1. Infected pigs
2. Infected semen
3. Contaminated needles
4. Contaminated fomites (coveralls, boots, shipping parcels, transport vehicles).
5. Mosquitoes (*Aedes vexans*)
6. Houseflies (*Musca domestica*)
7. Mallard ducks

At this time, it has been either difficult or impossible to demonstrate transmission of PRRSV by the following routes:

1. Aerosols
2. Rodents (mice, rats, guinea pigs)
3. Human beings (unless visible contamination is evident on the palms of the hands)

At this time, the following species do not appear to be biological vectors of PRRSV:

1. Rodents (mice, rats, guinea pigs)
2. Raccoons
3. Opossums
4. Dogs
5. Cats
6. Starlings
7. Skunks
8. Sparrows

Current studies at the SDEC in the area of PRRSV transmission are focusing on the role of the contaminated livestock trailer, the possibility of insects as biological vectors, and transmission by fomites during warm weather.