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Farm history

• In a farrow-to-finish unit of 9 Piétrain sows, between December 22, 2023, and January 8, 2024, **11 pigs present clinical signs:**

- anorexia/low feed ingestion but willing to eat (n=11/11)
- ulcerative lesions of the coronal edge of one or more hooves (n=11/11; picture a)
- lameness (n=4/11)
- posterior paresis (n=3/11; picture b)
- alopecia on the tail (n=2/11; picture c)

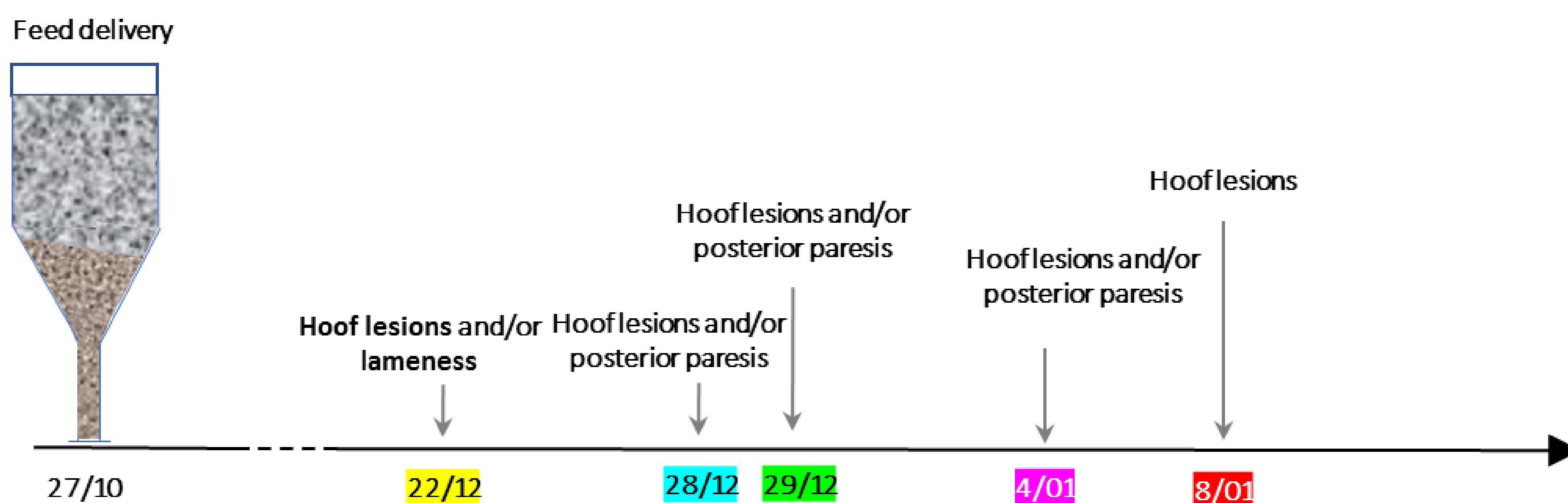


Figure 1: Timeline of the clinical case

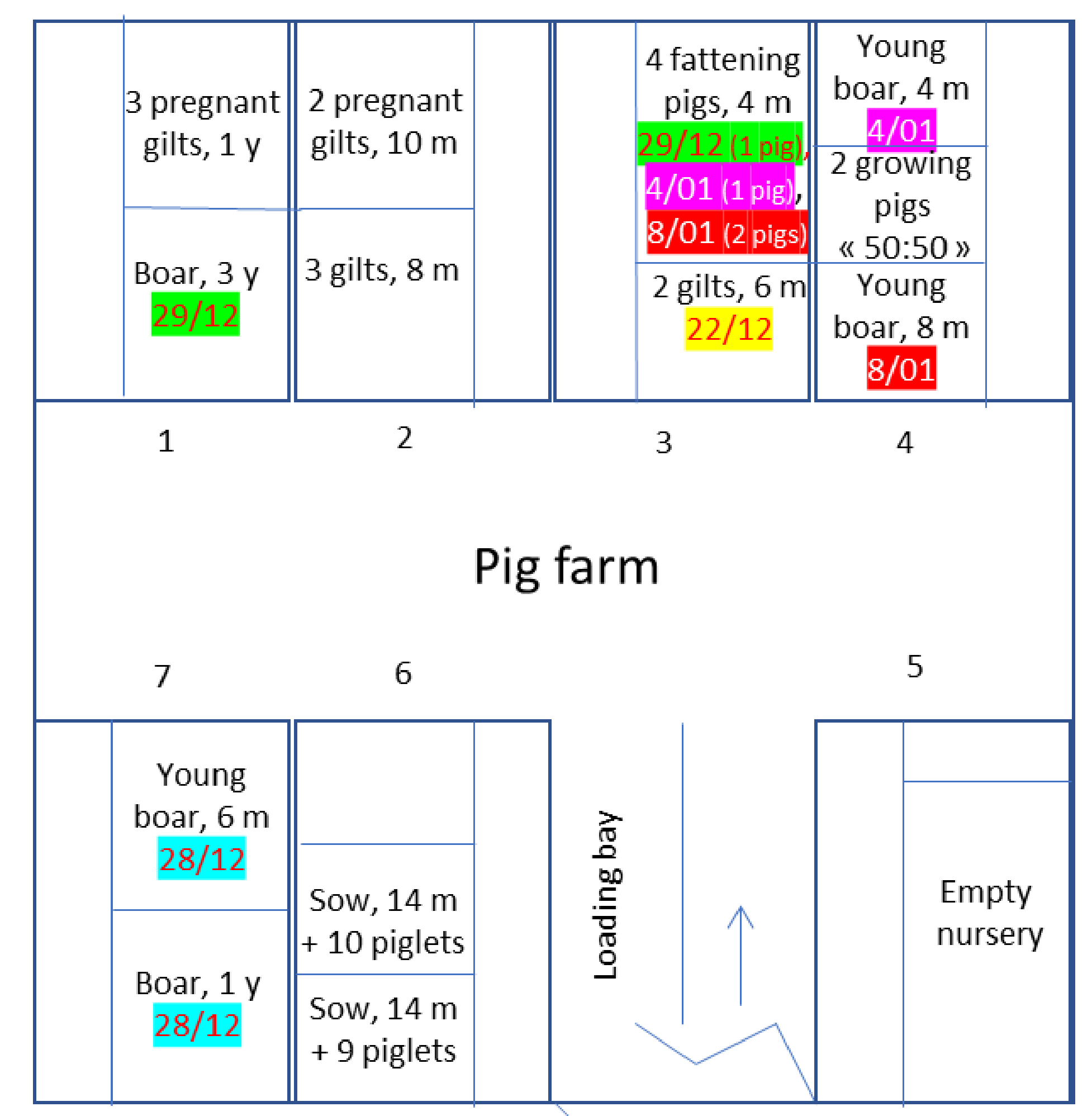


Figure 2: Plan of the pig farm

Diagnosis

- Notifiable swine vesicular diseases and infectious pododermatitis (foot rot) were ruled out.
- Ergot intoxication of the feed was excluded by testing a feed sample.
- **Increased serum selenium** (7-8 mg/L; normal values: 0.1-0.2 mg/L) and **analysis of the feed** (30 ppm of selenium; diet label: 0.4 ppm) confirm the diagnosis of selenium toxicosis [1,2].

Discussion

- Concentrations ≥ 1 to 5 mg/kg of feed are considered toxic for pig [3].
- The silo still contained feed delivered before 27/10, explaining the delay in cases and the variable symptoms in pigs exposed daily to irregular doses of selenium (see silo form in Figure 1).
- 13 days after withdrawal of the feed, selenium liver concentration (after necropsy) was 46 mg/Kg (normal value: 0.8-4.8 mg/kg).
- 15 and 67 days after withdrawal of the feed, serum selenium were 4.20 ± 0.26 and 0.13 ± 0.06 mg/L, respectively.
- Serum selenium of 0.13 ± 0.06 mg/L confirmed a **return to normal within 2 months**, as described in the literature [4].

Conclusion

- ✓ There is a fine line between recommended and toxic doses of selenium in pig feed: **errors in dosage occur!**
- ✓ Selenium toxicosis can cause severe ulcerative lesions of the hooves, as well as notifiable swine viral vesicular diseases.
- ✓ Selenium poisoning should thus be included **in the differential diagnosis of these notifiable diseases.**
- ✓ As serum selenium decreases slowly, a **60-days waiting period** before slaughter should follow an episode of poisoning.