Available diagnostic tools to demonstrate *Erysipelothrix* spp presence and to further characterize the bacterium.

Application	Diagnostic tool	Comments
Detection of live bacterium	Direct bacterial isolation	• Laborious and time consuming (>3 days). • Allows antimicrobial analysis and further isolate characterization. • Low sensitivity. • Interference of prior antimicrobial treatment.
	Indirect bacterial isolation after enrichment steps	• Laborious and time consuming (>3 days). • Allows antimicrobial analysis and further isolate characterization. • Significantly increased sensitivity compared to direct isolation. • Interference of prior antimicrobial treatment.
Detection of antigen	Immunohistochemistry	• Particularly useful on chronic lesions and skin. • No interference of prior antimicrobial treatment with detection. • Requires availability of anti-serum.
Detection of DNA	Conventional PCR	• Sensitive and rapid. • Requires an electrophoresis step. • No interference of prior antimicrobial treatment with detection.
	Real-time PCR	• Sensitive and rapid. • No electrophoresis step; therefore faster compared to conventional PCR. • No interference of prior antimicrobial treatment with detection. • Requires sophisticated equipment and experienced lab technicians.
	Loop-mediated isothermal amplification (LAM) assay	• Sensitive and rapid. • Cost effective and requires only rudimentary equipment. • Could be used directly on the farm.
Detection of antibodies	ELISA	• Can be used to detect and monitor humoral response over time. • Low cost.
	Fluorescent microbead immunoassay (FMIA)	• Can be used to detect and monitor humoral response over time. • Low cost. • Possibility of multiplexing for simultaneous detection of antibodies against several pathogens.
Further characterization	Pulsed-field gel electrophoresis (PFGE)	• Requires availability of an isolate. • Capable of differentiating vaccine strains from field strains. • Time consuming (>3 days after initial isolation).
	Serotyping	• Requires availability of an isolate. • Time consuming (>3 days after initial isolation). • Requires availability of anti-serum against all serotypes.