VIEWS ON CHALLENGES AND NEXT STEPS IN BRAZILIAN MEAT INSPECTION

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BACKGROUND

Brazil's swine sanitary inspection system faces its own challenges, including the large number and wide geographical distribution of slaughterhouses, requiring coordinated actions to maintain inspection effectiveness amid evolving regulations, technological advances, and the strict requirements of importing countries. In 2024, Brazil exported approximately 1.3 billion tons of pork[1] to markets with some of the world's most rigorous sanitary and quality standards. To address these demands, the Department of Inspection of Animal Products (DIPOA) has invested in modernizing and strengthening the national inspection system. This paper synthesizes key initiatives and control strategies in place, focusing on risk-based approaches and innovation adoption.

MATERIALS AND METHODS

This work is based on the analysis and synthesis of official documents, technical manuals, and regulatory frameworks related to meat inspection and food safety in Brazil.

RESULTS

Recent DIPOA initiatives to modernize sanitary inspection include updating programs such as the National Pathogen Control Program (PNCP) and the Conformity Assessment Program for Edible Animal Products (PACPOA), which are key tools for food safety risk assessment. A virtual training platform now supports continuous professional development for official veterinarians nationwide. Standardization has progressed with updated inspection manuals and a national project to harmonize *post-mortem* lesion identification in swine. Regulatory updates include new *post-mortem* procedures and risk-based inspection (RBI) models, exemplified by the RBI Procedures Manual for pig slaughterhouses, which specifies establishment duties and audit processes. A new federal law established the legal basis for self-regulation programs under official supervision, advancing shared responsibility in inspection, through audits and enforcement of penalties for non-compliance. In addition, DIPOA developed a guidance manual to support technological innovation, providing companies with a clear process to obtain approval for new technologies and modernize their operations.

The official *Salmonella* spp. control in pig carcasses by the PNCP completed its fifth year in 2023, using a sample of seven carcass swabs (n=7) with one positive allowed (c=1) per cycle. That year, a total of 588 samples were collected from 84 federally inspected establishments. A decrease in *Salmonella* spp. prevalence was observed over these years [2].

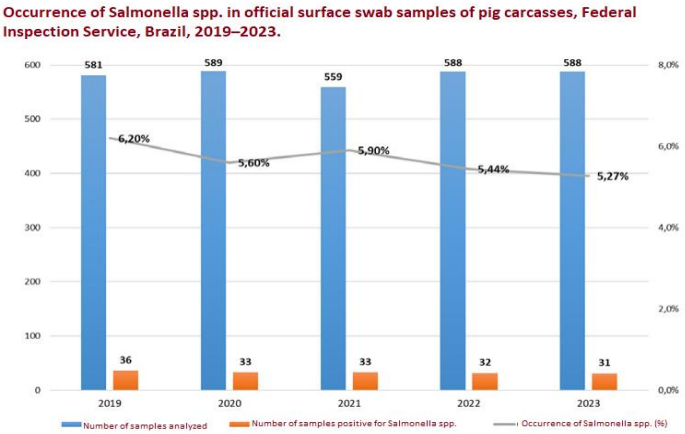

Figure 1. Salmonella spp. prevalence in pig carcasses under PNCP – Brazil, 2023.

The PACPOA program, which verifies conformity with food safety and other regulatory parameters, showed full compliance for Salmonella spp. in edible products in 2021–2023.

DISCUSSION and CONCLUSION

Brazil's modernization of sanitary inspection shows advances in professional training, pathogen monitoring, risk-based inspection, and self-regulation, reinforcing the positive impacts of science-based regulations. Incentives for innovation, such as the official manual guiding business operators in new technology approval, have established a clear pathway for advancement. *Salmonella* monitoring results reflect effective control measures. Modernization, however, requires careful management of innovations to ensure food safety while adopting new technologies: well-defined regulations, validated methods, professional capacity-building, business operator accountability, and robust audits are essential pillars for reliability and transparency. Looking ahead, it is clear that this modernization will depend on continuous engagement between public and private stakeholders, a robust and adaptive legal framework, and a shared commitment to science-based decision-making. Therefore, regulatory frameworks must balance flexibility to foster innovation and growth with strict measures to safeguard consumer safety.

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