



Increasing Adoption of Artificial Insemination for Livestock

Utilizing artificial insemination can improve productivity and increase livestock farmers' incomes

Study Overview

TCI researchers conducted a systematic analysis of previously published research on artificial insemination for livestock breeding. The researchers examined 18 studies spanning 10 different countries throughout the developing world, creating a list of factors that most heavily affect the adoption of artificial insemination.

Background

As India's population grows and dietary preferences change, there is increasing demand for animal-based food products like meat and milk. Artificial insemination offers several benefits for farmers reacting to this changing demand, as it accelerates genetic improvement, reduces herd size, mitigates disease transmission, and increases incomes. The global artificial insemination industry is projected to reach \$8.9 billion by 2030, with a compound annual growth rate of 8.6% from 2022–2030. Despite the advantages of artificial insemination and its expected growth, adoption of the technology has been uneven in India and elsewhere.

RESULTS

Through their analysis, TCI researchers found that education and awareness of artificial insemination are key factors that positively influence adoption among farmers. High milk prices, yields, and income also positively influence adoption, as does membership in farmer groups. Farmers' distance from artificial insemination centers is another significant factor, with greater distances making adoption less likely. High costs also make farmers less likely to use artificial insemination. Contact with extension agents and training are associated with higher adoption rates, as are the perceptions that artificial insemination is profitable and easy to use.

POLICY RECOMMENDATIONS

- Increase awareness of artificial insemination through educational programs, campaigns, and training and extension services.
- Invest in infrastructure to reduce travel times to artificial insemination centers.
- Make artificial insemination more affordable through subsidies, cost-sharing mechanisms, and improved access to credit.
- Support and promote cooperative and farmer group initiatives to provide improved market access, educational resources, and management guidance.

Seth P., Chandran B., Mittra B., and Pingali P., Understanding the Determinants of Farmers' Adoption of Artificial Insemination in Livestock, *Economic & Political Weekly*, Vol. 60, Issue No. 7, February 15, 2025.

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