Non-CO₂ Greenhouse Gases: Methane

Source/Sectors: Agriculture/Enteric Fermentation

Technology: Improving animal productivity through the use of growth hormones (A.3.1.3)

Description of the Technology:
Naturally occurring hormones and synthetic compounds have been identified or developed to achieve production-enhancing effects. Use of these hormone compounds reduce methane emissions through improved feed efficiency and reduced time to slaughter. Although the use of growth hormones is currently considered controversial, a large number of compounds such as recombinant bovine somatropin (rbST), antibiotics and anabolic steroids are currently being used and tested as feed additives for ruminants (de Jager et al., 2001; O’Hara et al., 2003; Bates, 2001).

Effectiveness: Bovine somatotropin (BST) growth hormone was observed to decrease methane emissions in dairy herd. BST has been observed to decrease CH₄ emissions by 9% in US dairy herd.

Implementability: Applicability is limited in some countries.

Reliability: Fair

Maturity: Fair

Environmental Benefits: Methane emission reduction

Cost Effectiveness: None reported.

Industry Acceptance Level: Fair

Limitations: Not approved to use in Canada due to concerns over hormones in milk and meat products.

Sources of the information:


