

Biotechnology can be defined as any technique that uses living organisms or substances from such organisms to make or modify a product, to improve plants or animals or to develop micro-organisms for specific purposes.

Biotechnologies for beef cattle production

Reproductive biotechnology

- 1) Artificial insemination
- 2) Estrous cycle synchronization
- 3) Embryo transfer
- 4) Cryopreservation of embryos
- 5) Bisection of embryos
- 6) Sexing of embryos
- 7) Sexing semen
- 8) In vitro fertilization
- 9) Cloning by nuclear transplantation
- 10) DNA-based technologies

Animal genetics and breeding

- 1) Nucleus Breeding system
- 2) Multiple ovulation and embryo transfer (MOET)
- 3) Development of composite breeds
- 4) Marker assisted selection (MAS)

Animal nutrition

- 1) Rumen (GIT) manipulation
- 2) Enzyme degradation of fibrous feeds

Animal health

- 1) Specific antibody detection (SAD)
- 2) Enzyme linked immuno-sorbent assay (ELISA)
- 3) DNA detection
- 4) Vaccination
- 5) Polymerase chain reaction (PCR)