Preface

Biotechnology as any technique that used living organisms to make or modify a product, to improve plants or animals or to develop microorganisms for specific uses. The document focuses on the development and application of modern animal biotechnology based on new enabling techniques of animal tissue culture, genetic and protein engineering, enzyme and recombinant DNA technology, gene cloning, human and animal health, production of anti-microbial drugs, the general manipulation of genes by selective breeding and techniques such as artificial insemination, embryo transfer, etc.

Genetic progress in livestock breeding programmes has relied either on breed substitution or upon the traditional quantitative genetic approach of testing and selection. The rate of progress possible is dependent upon selection intensity and generation turnover. Genetic engineering can be used to complement traditional methodology of quantitative genetics—in order to be of real significance biotechnology should provide an average improvement equal to that of traditional methodology.