

# GROWTH PROMOTERS



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- Improved growth rate
- Improved feed efficiency
- Improved carcass quality



# GROWTH PROMOTERS

- Health conscious consumers
- Trimmer carcass



# HORMONAL GROWTH PROMOTERS

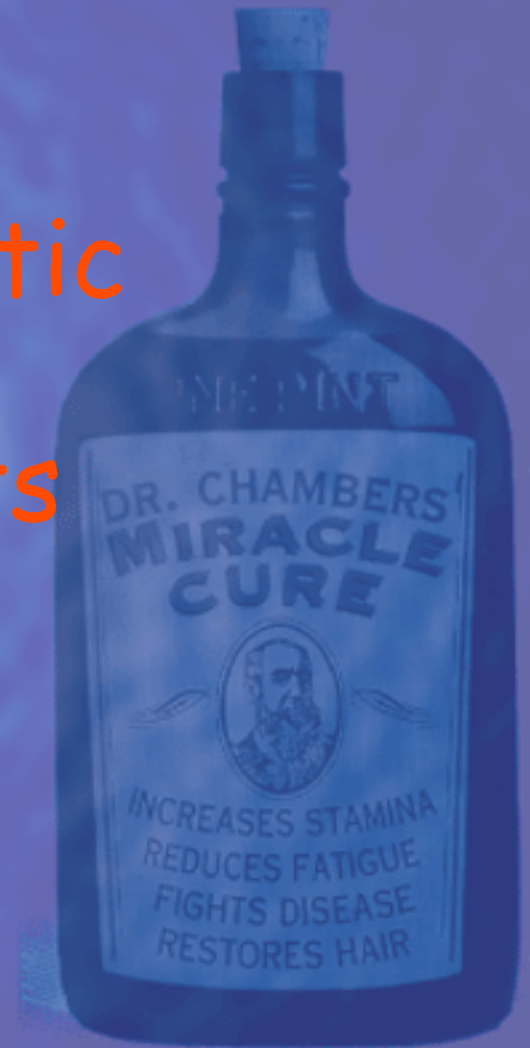
- Good nutrition is essential
- Record keeping required
- European Union bans use





# GROWTH PROMOTERS

- Steroids-natural & synthetic
- Beta adrenoceptor agonists
  - Clenbuterol (illegal)
- Somatotropin (BST)



# GROWTH PROMOTERS

- Antibiotic (feed additives)
- Rumen modifiers
  - ionophores - e.g. monensin
- Probiotics (*Lactobacillus* spp)



# HORMONAL GROWTH PROMOTANTS

- Androgens
  - testosterone
  - trenbolone acetate
- Oestrogens
  - oestradiol
  - zeranol
- Progestagens
  - progesterone





# HORMONAL GROWTH PROMOTANTS

## Mechanism of Action:

- Increase Nitrogen retention
- Decrease catabolism
- Growth hormone





# HORMONAL GROWTH PROMOTANTS

## Useful Effects:

- Rate of gain  $\uparrow$  10-15%
- More muscling
- Less fat (wastage)



# HORMONAL GROWTH PROMOTANTS

## Side Effects:

- Increased mounting
- Rectal & vaginal prolapse
- Oedema
- Udder development



# HORMONAL GROWTH PROMOTANTS

## HGP Products:

- Compudose 100, 200, 400
  - Oestradiol benzoate
- Implus Magnum
  - Oestradiol benzoate
  - Trenbolone acetate





# HORMONAL GROWTH PROMOTANTS

## HGP Products:

- Revalor - H and Revalor - S:

- Oestradiol benzoate
- Trenbolone acetate





# HORMONAL GROWTH PROMOTANTS

## HGP Products:

- Synovex - S, - H, - Plus:
  - Oestradiol monobenzoate
  - Trenbolone acetate
- Synovex - C
  - Oestradiol monobenzoate
  - Progesterone



# HORMONAL GROWTH PROMOTANTS

USES: (withholding time = nil)

- Steers, Heifers (non-breeding)
  - Compudose, Implus, Revalor & Synovex
- Calves
  - Compudose, Implus, Revalor & Synovex
- Bulls
  - zeranol - Ralgro® no NZ license



# HORMONAL GROWTH PROMOTANTS

## MAF REQUIREMENTS

HGPs are for use in cattle only.

HGPs are administered by a veterinarian or trained technician.

HGPs implanted in the ear only





# HORMONAL GROWTH PROMOTANTS

## MAF REQUIREMENTS

All treated cattle must have a MAF approved ear tag, a secondary ID tag and an orange "growth promotant" tag

Cattle that lose ear tags must be retagged

MAF approved ear tags must not be used for any other purpose





Records must be completed at the time of implantation and kept by the owners and veterinarians for 5 years.

It is an offence under the Animal Products Act of 1999 to fail to comply. Fines up to \$20,000 for individuals and up to \$100,000 for corporations or companies are applicable.



# Hormonal Growth Promoters





# HGPs

## Administration



# HORMONAL GROWTH PROMOTANTS





# GROWTH PROMOTANTS

RUMENSIN - ionophore



# GROWTH PROMOTANTS



Toltrazuril:

Coccidiostat for poultry



# ANABOLIC STEROIDS USES:

- Convalescing animals
- Renal Disease (anaemia)
- Performance enhancers
- Products:
  - ethylestrenol
  - nandrolone
  - stanolozol



# GROWTH PROMOTERS

## SUMMARY:

- HGPs
  - National database: <http://atis.org.nz>
- Anabolic steroids
- Rumen modifiers

