Cottonseed

- Methane production in rumen is low due to its low fermentable carbohydrate

- Used in the diets in order to bring the total fat content in the diets at 5-7%.
- Free gossypol
  - İron sulphate can be added

Cyclopropenoid fatty acids

Whole cottonseed

- DM 90%
- CP 20%,
- N degradability in rumen is higher than 70%
- CF 27%, ADF: 35%, Lignine: 10%
- EE: 19% (linoleic, oleic, palmitic ↑)
- Ash: 4%
- ME(ruminant):2870 kcal/kg

Dehulled cottonseed

- DM: 90%
- CP: 32%
- CF: 13%, ADF: 18%, lignine: 6%
- EE: 31%, Ash:5%
- Cattle: 1kg/day
  - 10-15% (in diet DM)

  Sheep: 300 g/day

Sunflower seed

- DM: 90%
- CP: 16-20%
- CF: 16-20%
- EE: 42-50%
  - (oleic acid, linoleic acid↑)
- Ash: 3-4%

Sunflower seed

- İmportant high energy feedstuffs
- Dehulled sunflower seed:
  - CF ↓, nutritive value ↑
  - Laying hens: 10%
  - Broiler: 20%
  - Lamb, sheep, goat: 10%

Sunflower seed

- Dairy cattle: 8%
- PUFA ↑, Conjugated linoleic acid, omega 6 fatty acid ↑
- High fat diets decrease feed intake and milk production
- Finishing period of fattening: 15% sunflower seeds added instead of barley:
- Feed efficiency ↑, conjugated linleic acid in meat ↑, fecal energy lost ↓

Linseed, flaxseed (Keten tohumu)

- DM: 90%
- CP: 20-28%
- CF: 10-12%
- EE: 31-43%
- Unsaturated fatty acids ↑
- Alpha linolenic acid (ALA, omega 3 fatty acid 45-60%) ↑
- Conjugated linoleic acid ↑
- Crude ash: 3-5%
- MEruminant: 4300 kcal/kg DM
- MEpoultry:3800 kcal/kg DM

- Laxative property
- Pozitive effects on skin and hair
- Contains lignan: phytoostrogenic and anticarcenogenic properties
- Linemarin: cyanogenic glycosides
- Linatin: vitamin B6 antagonist
- Phytic acid
- Goitrogenic matters

- Dairy cattle, beef cattle; 10%
- Poultry 10%
- In animal products:
- Omega 3 fatty acids ↑
- Omega 6/omega 3 fatty acids ↓
- Egg yolk cholesterol ↓

INDUSTRIAL BYPRODUCTS

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