Fats

Equine Nutrition #15
Created for Canadian Pony Club Education
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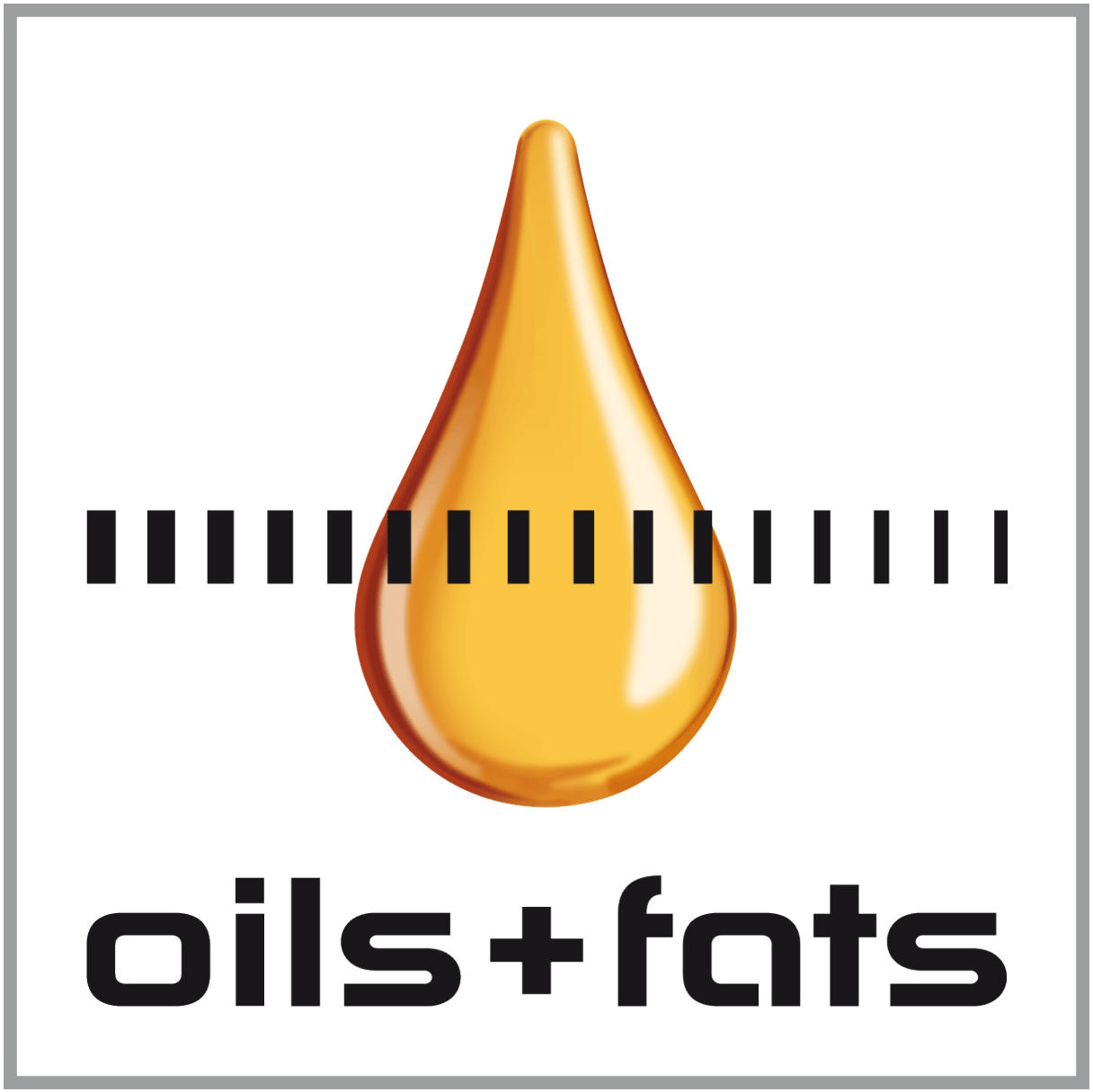
Fats



Fats and Oils

- Oils are also knows as fats or lipids
  - – oils are lipids in a liquid form
- Two types of oils can be fed:
  - Plant source
    - Corn
      - Most commonly fed
    - Linseed
    - Canola
    - Sunflower
  - Animal source
    - Cod liver oil is the most commonly fed animal source oil

Function of Fats

- Aid in the absorption of fat soluble vitamins
- Boost energy without disrupting behaviour
  - Energy dense, but slow release energy
- Used as a fuel during low intensity exercise
- Improve body appearance
- Help maintain condition of skin

Feeding fats

- Horses don't need oils in the diet but tolerate them well
- They are easily digested
- Excess oil in the hindgut can coat fibre and make it inaccessible to fermentation
- Oil has 2.25 the energy of carbohydrates
  - 1 cup of fats are equal to 1.2 pounds of oats

Two types of fatty acids

- Most are solid at room temperature
- Come from animal sources
- 75-80% digestible

saturated

- All are liquid at room temperature
- Come from vegetable sources
- More easily digested
  - 100% digestible

unsaturated

Feeding fats

- Feed in limited amounts
  - Most horse feeds contain less than 6% fat
  - Introduce to diet gradually
- Fats have a protein sparing action
  - This allows 100% of available protein to build and repair muscle rather than be used for energy
- Feed an antioxidant with oil to reduce free radical damage
- Unsaturated fats can become rancid

Two groups of fats

- Essential Acids
- Omega 3 and 6 need to be added to the diet
- Omega 9 is manufactured by the horse

- Non-essential Fatty Acids

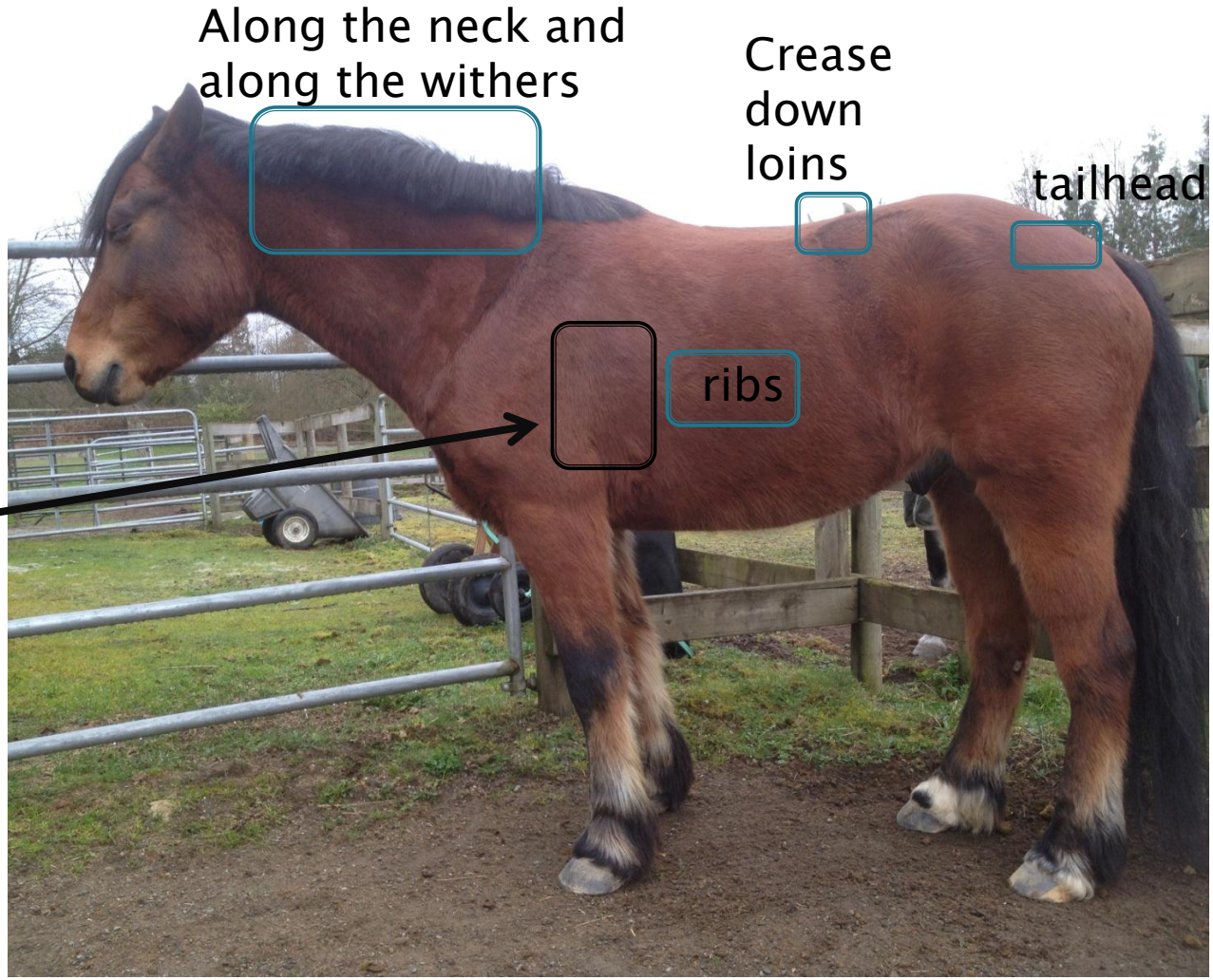
Essential Fatty Acids

Non-essential Fatty Acids

Excess Fats

- Excess fat will be stored in the body
- Do not feed in excess of 12% of concentrate ration
- Excess fats in hindgut can coat fibre, making it inaccessible to digestion
- Can contribute to high cholesterol in the blood
- Can contribute to the development of ailments, including:
  - Metabolic syndrome

Areas to check for weight



Fat pockets

Questions

- 1. Define fats.
- 2. What is the purpose of fats?
- 3. Compare and contrast essential and non-essential fatty acids.
- 4. Compare and contrast saturated and unsaturated fats.
- 5. What does ‘protein sparing action’ mean?
- 6. What are some cautions one must observe when feeding fats?