

# Effects of dietary fat on fertility of dairy cattle: a meta-analysis and meta-regression

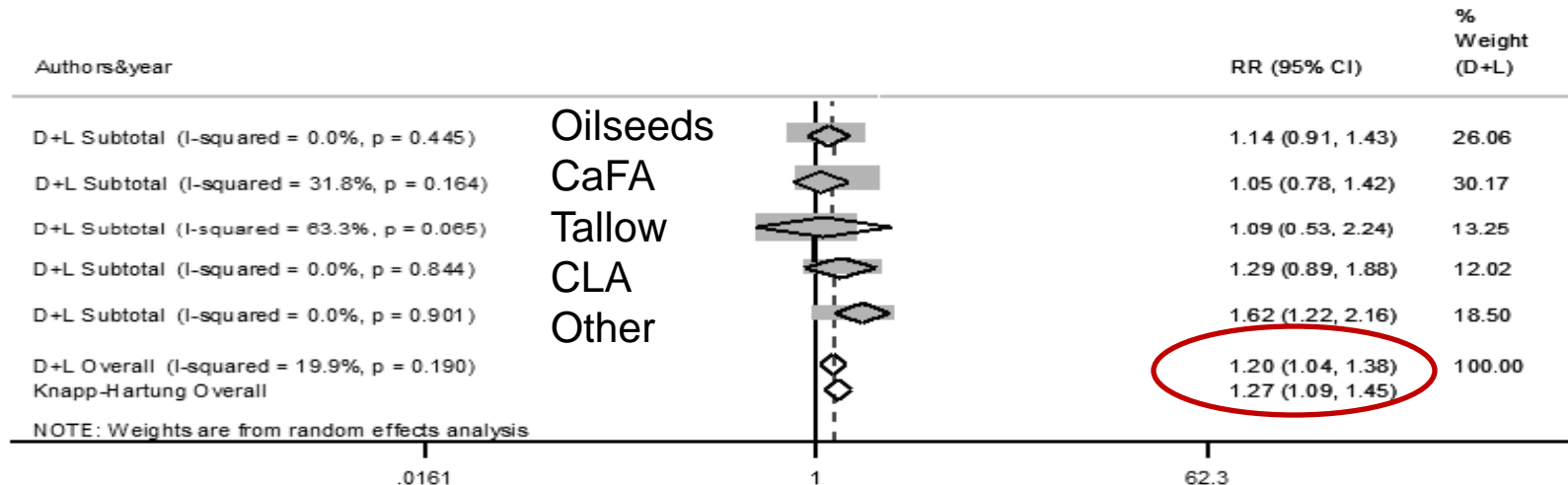
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- › Good transition management (esp. nutrition) is important for productivity and fertility
- › Fats are important as a source of energy as well as a precursor for hormones but studies have shown inconsistent effects of fats on fertility
- › Meta analysis
  - › Allows similar interventions to be pooled to increase power and explore new hypotheses
  - › Allows confounding to be addresses

- › Systemic review found 17 studies containing 26 comparisons
- › Feeding fats increased risk of pregnancy by 27% ( $I^2 = 19.9\%$ )
- › Tended to reduce calving to pregnancy interval by 16% ( $I^2 = 0.0\%$ )



- › The proportion of cows pregnant
  - Increased with increasing intake of **fermentable NDF and soluble fiber** (kg/d)
  - Increased with increased estimated cost of **urea synthesis** (MJ/d)
  - Decreased with increased **actual milk yield** (kg/d)
- › Calving to pregnancy interval
  - Tended to reduce with increased **oleic acid (c18:1c) intake and availability** at the duodenum.