

# The nutritional value of pastures for growing and breeding Thoroughbreds

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# Feeding value of pastures for horses

- Growth rates reported for Thoroughbred foals raised in NZ on pasture alone to be similar to supplemented horses in Northern Hemisphere (Hoskin, S.O. & Gee, E.K., 2004);
- Significant cost savings, Lucerne estimated \$0.04/kg DM;
- Benefits for health:
  - Reduction of stereotypic behaviour
  - Availability of nutrients (e.g. natural Vit K)





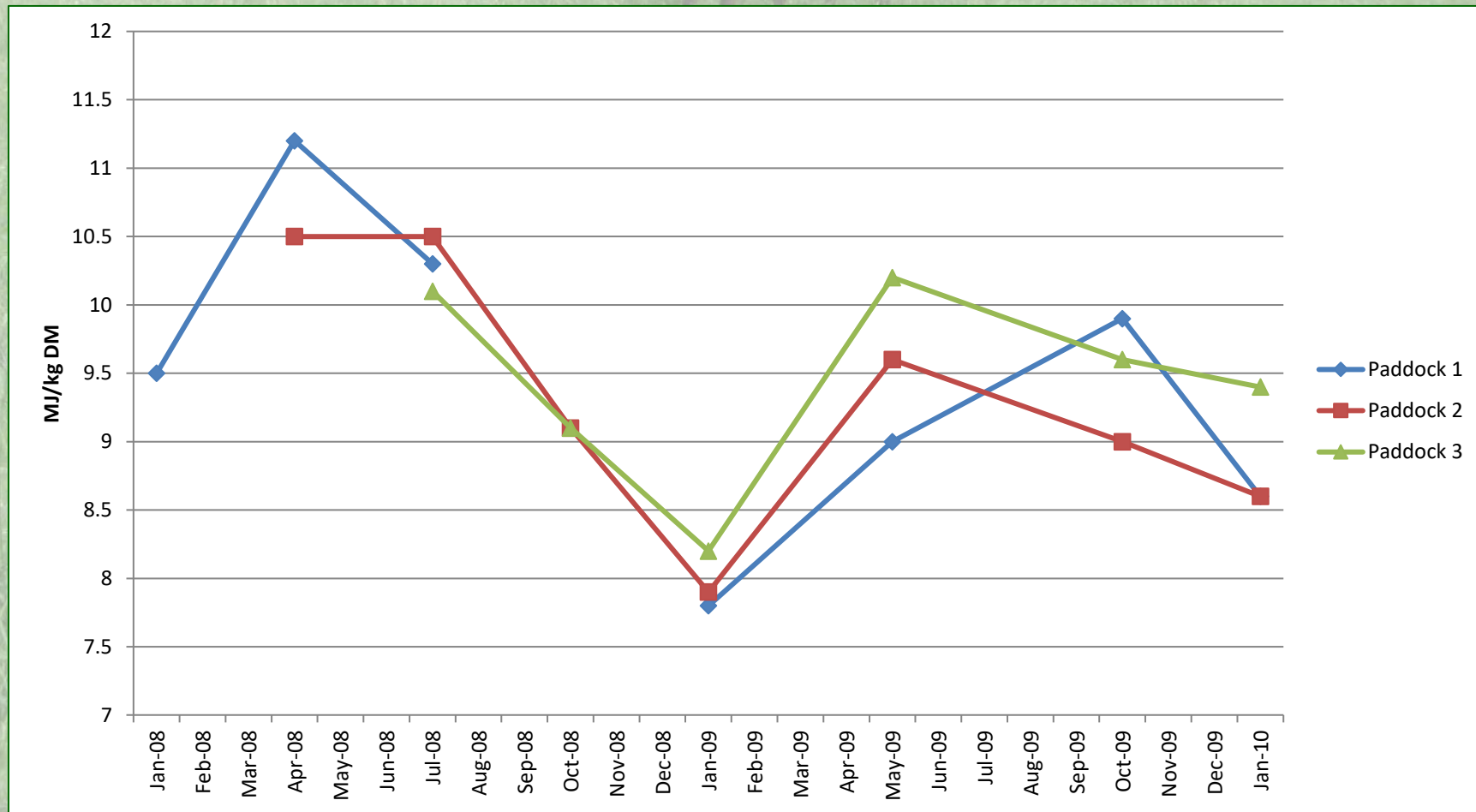
# Evaluation of pastures for growing and breeding horses

- Pasture samples collected from a NSW stud farm over a 2 year period;
- Samples were tested by wet chemistry (Dairy One, USA) for nutrient content;
- Nutrient levels were compared to broodmare and weanling/yearling nutrient requirements (NRC, 2007) at each time point.

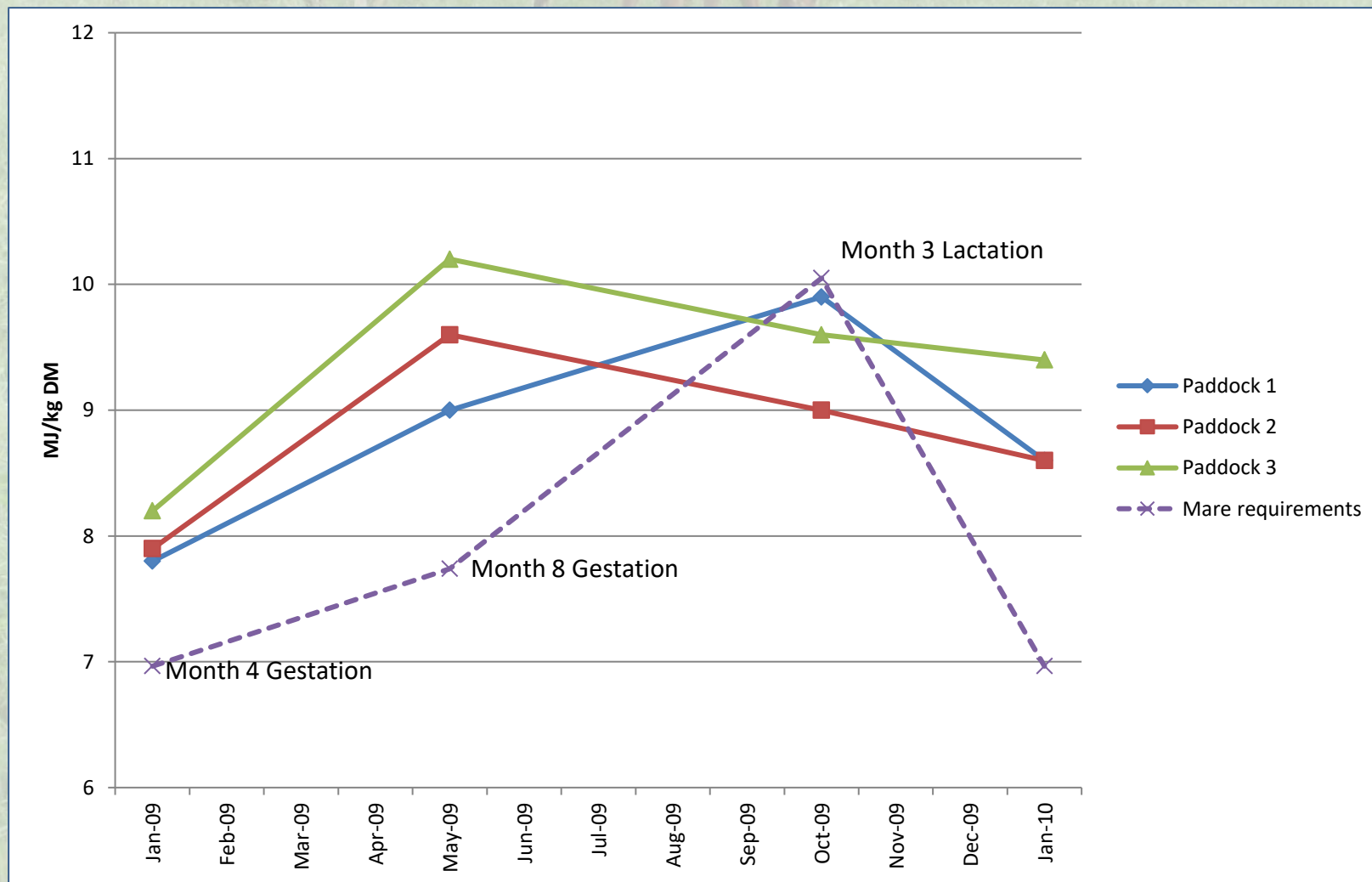




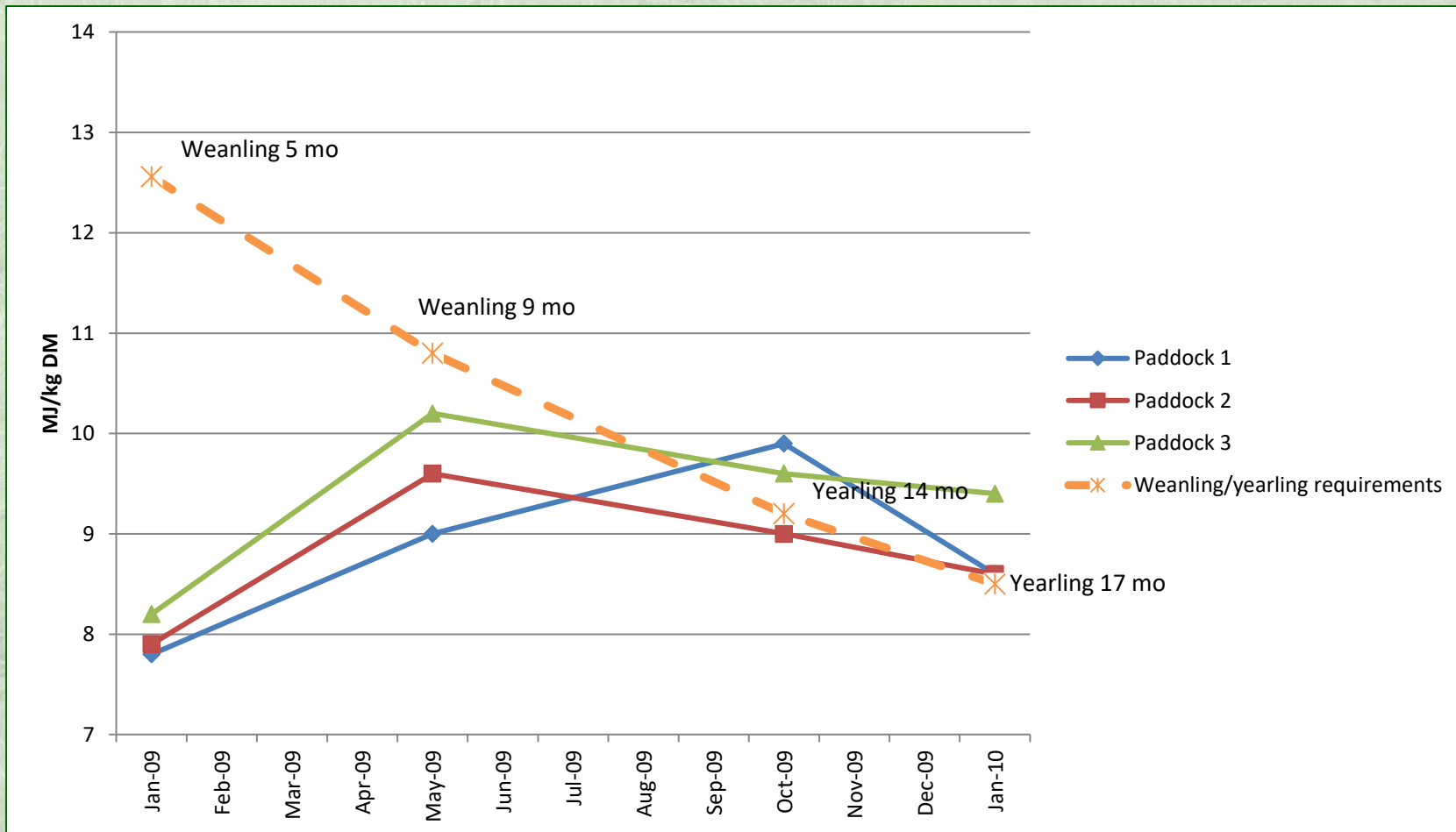
# Calculated Digestible Energy (DE) over time



# Calculated DE levels in pasture versus mare requirements (per kg)

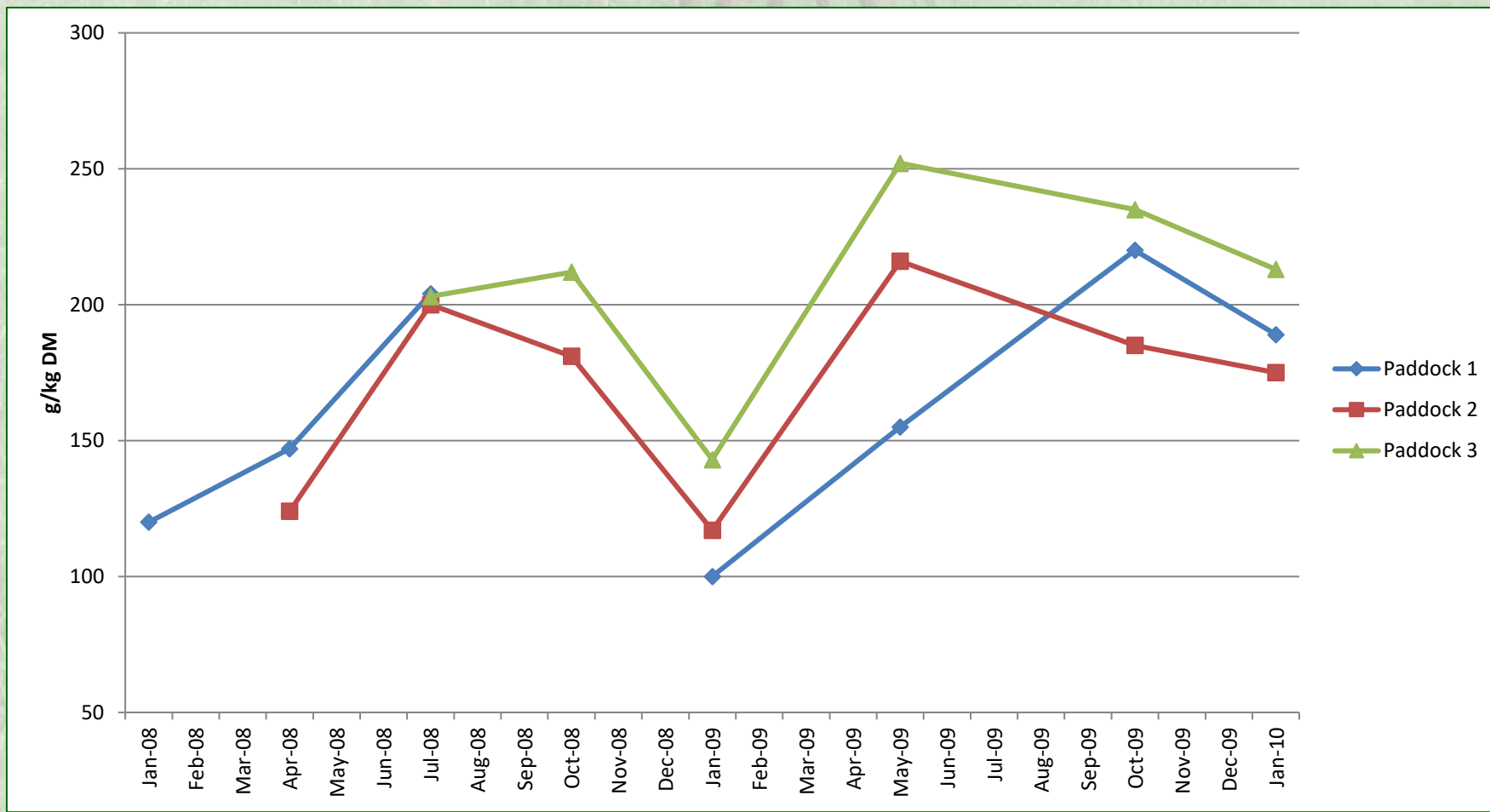


# Calculated DE vs growing foal requirements (per kg)

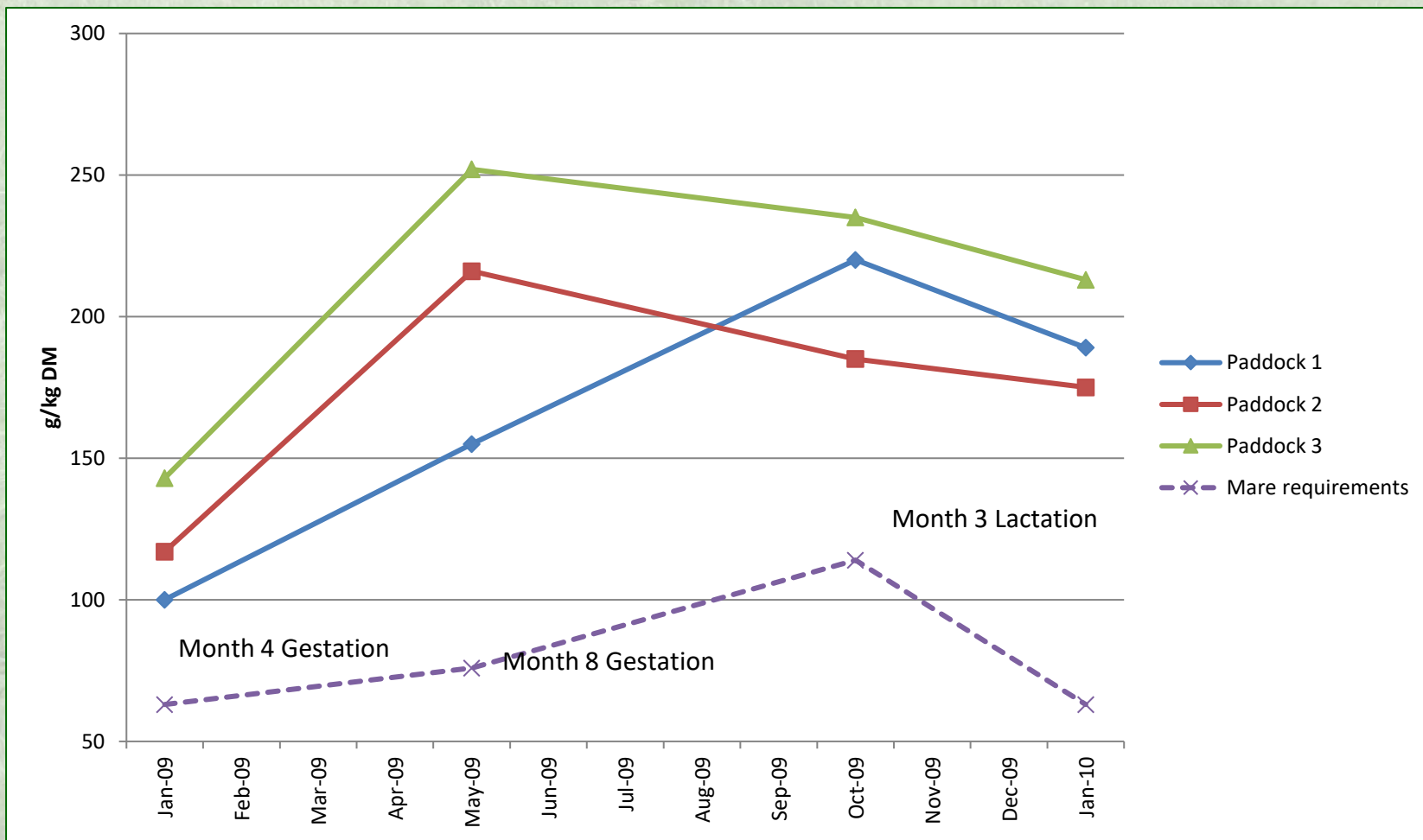




# Crude Protein

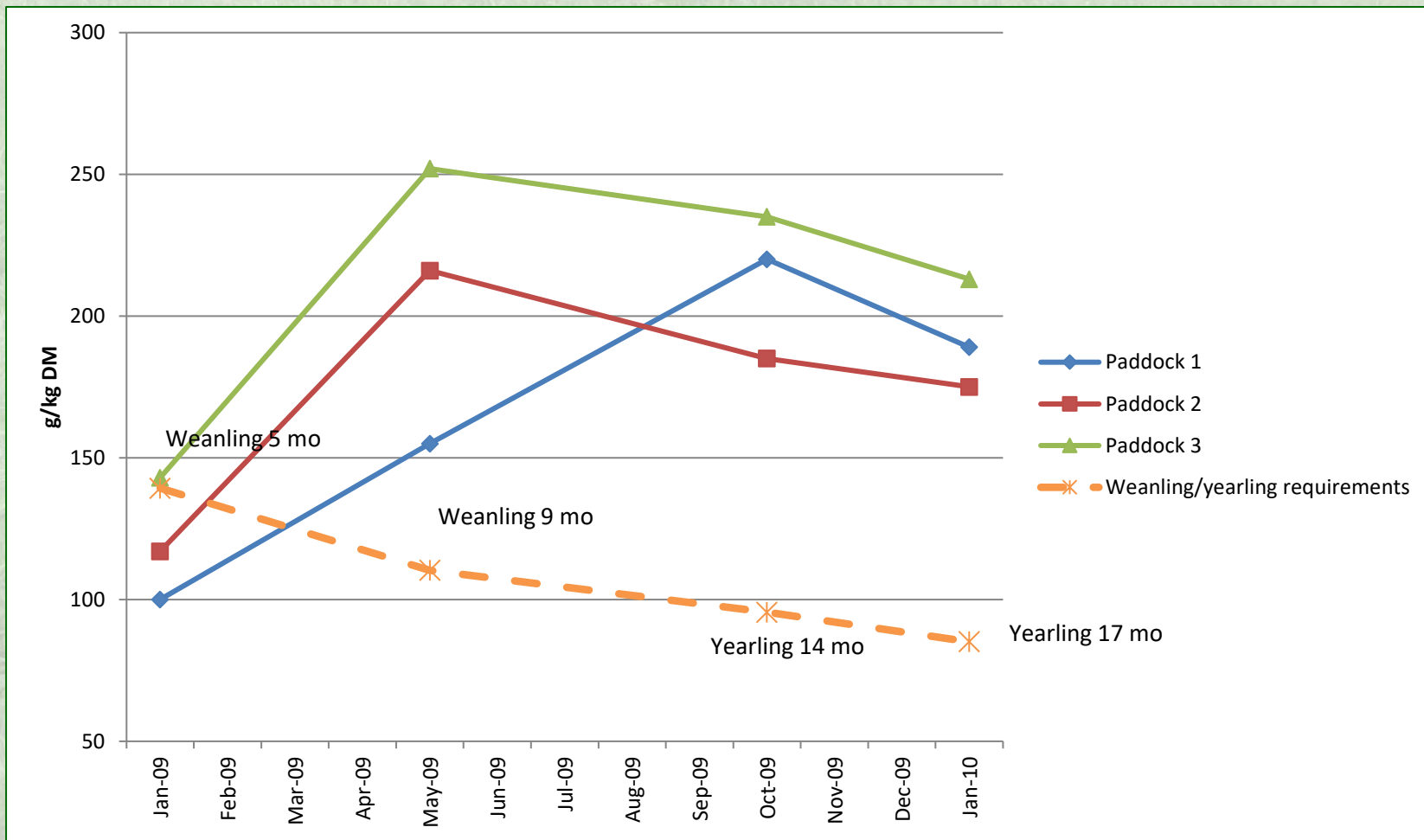


# Crude Protein levels in pasture versus mare requirements (per kg)

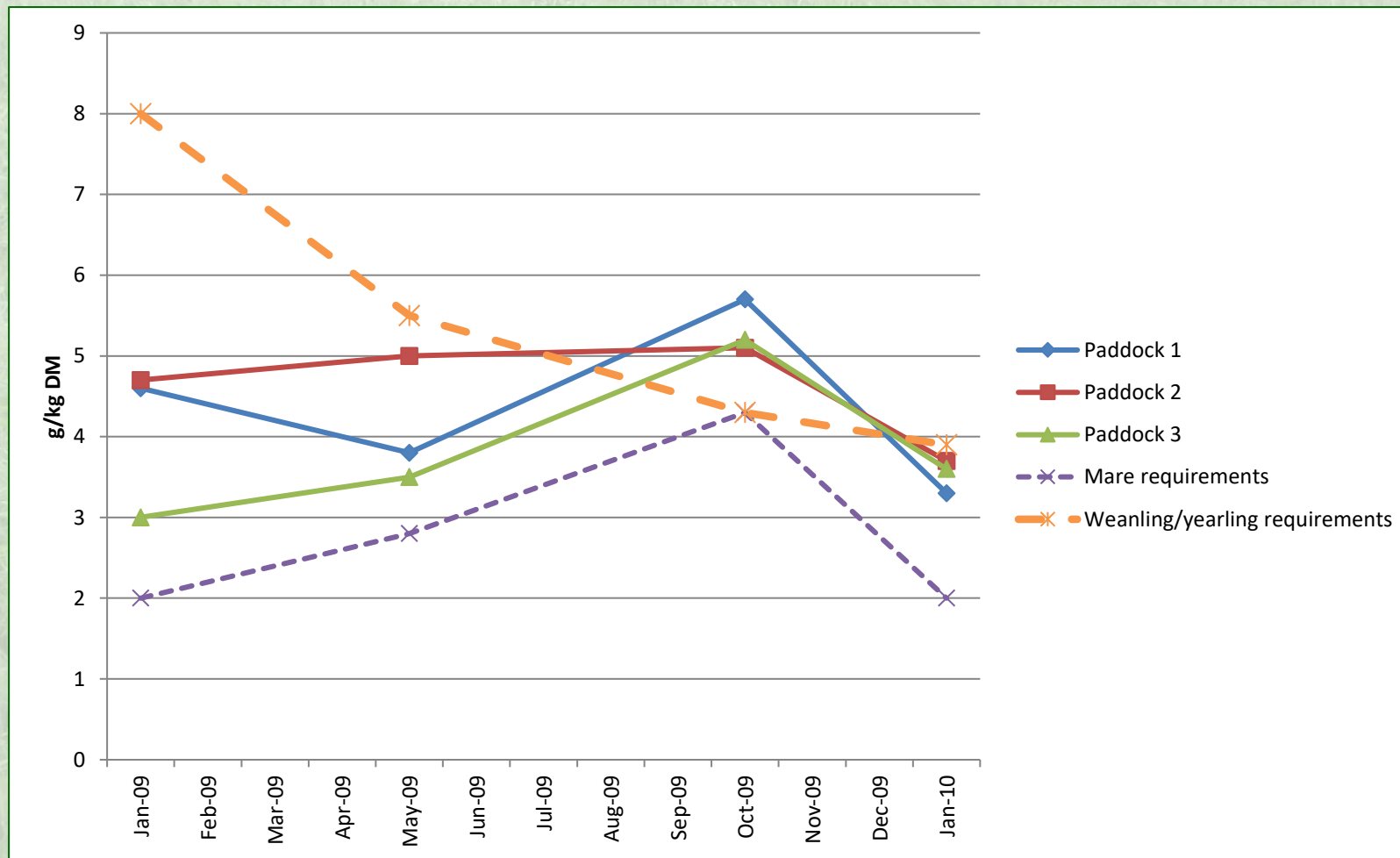




# Crude Protein versus growing foal requirements (per kg)

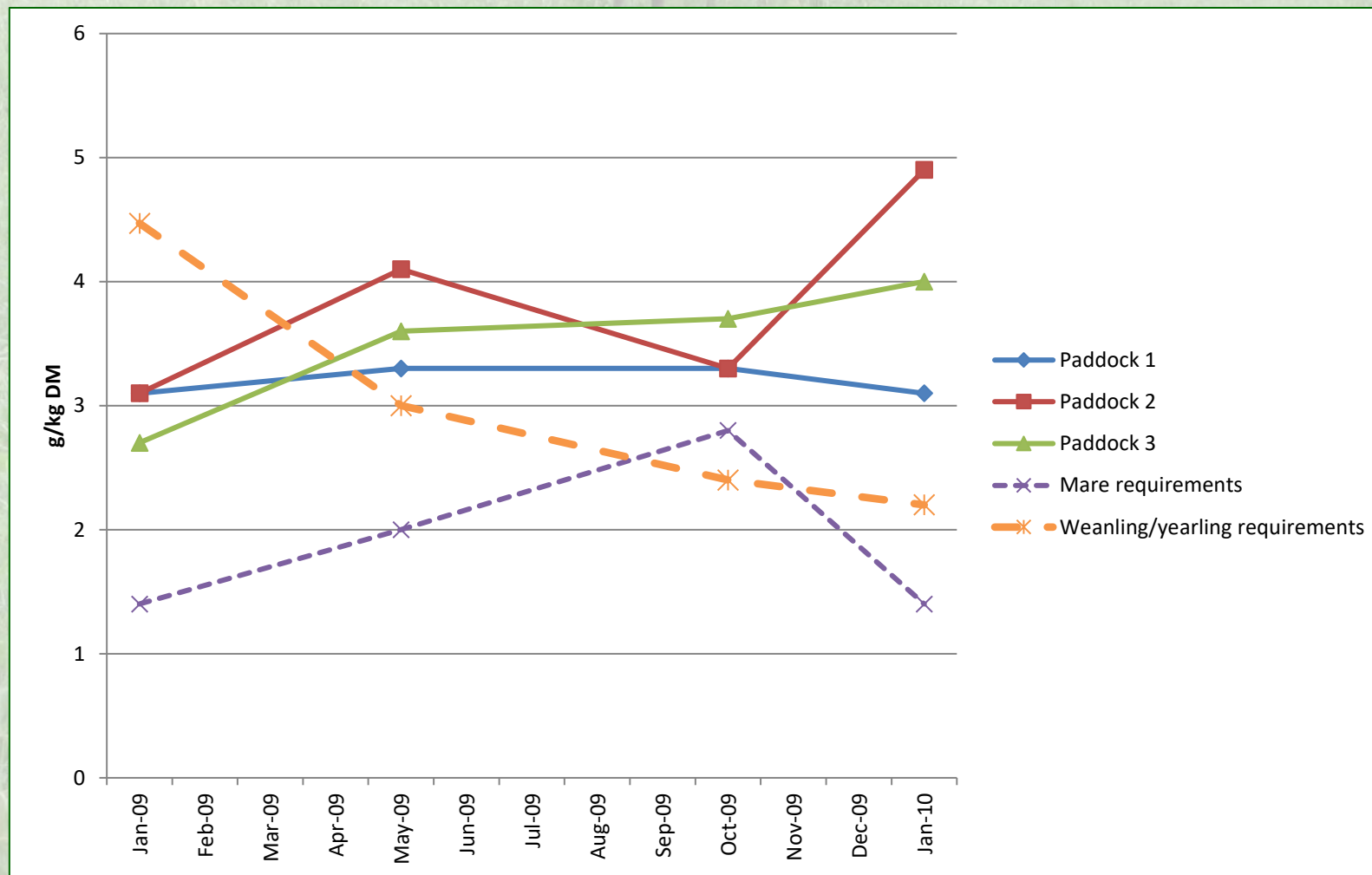


# Calcium levels of pasture versus horse requirements





# Phosphorus levels of pasture versus horse requirements

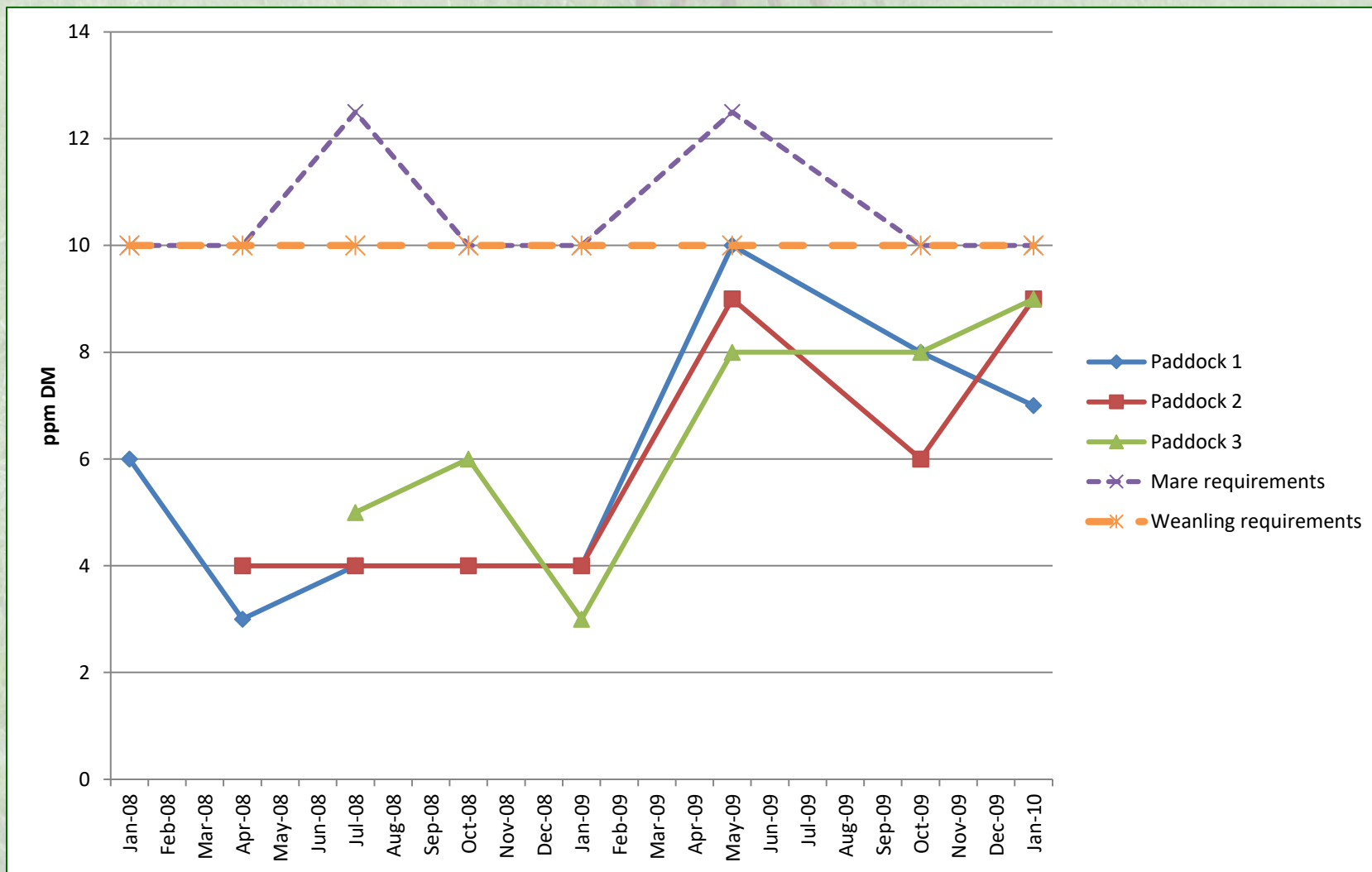


# Zinc levels of pasture versus horse requirements





# Copper levels of pasture versus horse requirements



# Implications

- Study identifies limitations of pastures as source of nutrients for growing and breeding Thoroughbreds;
- On-going pasture monitoring and development of pasture database allows for
  - The development of feeds and feeding programs to meet specific farm requirements;
  - The planning of supplemental hand feeding according to weather observations;
  - The planning of movement of stock around a farm.
- End result
  - best use of pastures
  - minimisation of feed costs
  - optimal nutrient intake of mares and foals
  - reduction in veterinary costs



## Unimproved

## Improved

Oct 09



Dec 09



Feb 10



Apr 10





# Effect of a dust storm...

