

# K Phos-Boost®

**solvvet**  
Innovation by Request

## Improving Phosphorus and Potassium Levels in Dairy Cattle

Nutrient management is a key to effective dairy production, yet there are always improvements that can be made. For example, 50% of all fresh dairy cows are hypophosphatemic<sup>1,2</sup>. Serology work conducted by Solvet on several dairy farms would support these numbers where > 40% of the cows were hypophosphatemic. The major clinical signs of hypophosphatemia and hypokalemia are muscle weakness (incoordination) and reduced feed intake/anorexia.

In accordance with Solvet's commitment to Innovation by Request, K Phos-Boost® was developed for a dairy producer that was looking for a more convenient and effective way to administer phosphorus and potassium as an alternative to drenches.

K Phos-Boost® is the first potassium and phosphorus bolus available in Canada. With 100 g phosphate and 83 g potassium per bolus, K Phos-Boost® boluses increase protocol compliance and restore hypophosphatemic and hypokalemic serum levels in dairy cows.



### In studies undertaken by Solvet, several results stand out:

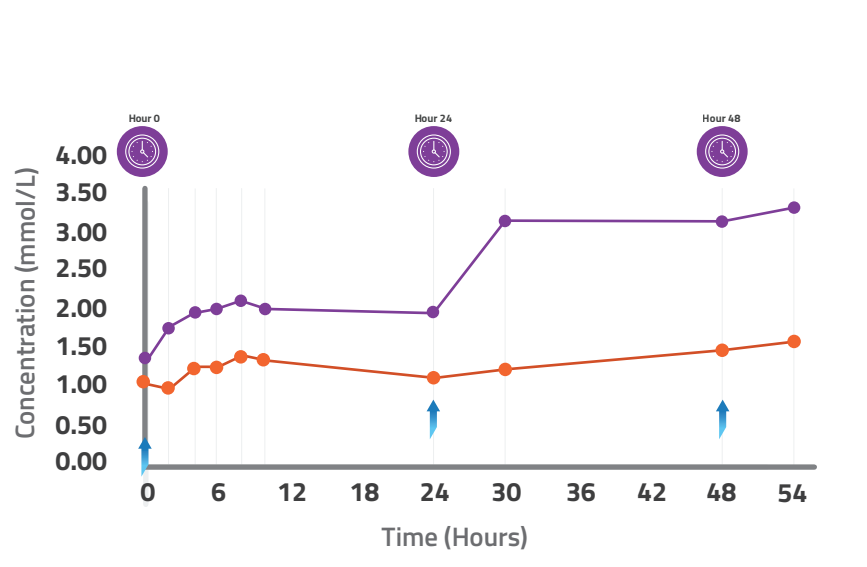
- K Phos-Boost® demonstrated rapid uptake of phosphorus and potassium (<2 hours) in serum following oral delivery of bolus and maintained therapeutic levels of phosphorus and potassium for over 24 hours following each 2 bolus treatment.
- The administration of K Phos-Boost® does not appear to interfere with calcium or magnesium serum levels.
- Twenty-seven (27) of thirty (30) cows down with suspected milk fever and treated with IV calcium benefitted from receiving K Phos-Boost® as reported by field veterinarians in a retrospective study.
- In an ongoing study (n=61), ketotic cows supplemented with K Phos-Boost® showed a more rapid recovery in milk production and rumination vs. existing therapeutic treatments alone.
- In a 15 cow study, K Phos-Boost® and Meloxicam Oral Suspension combined increased blood serum phosphate levels vs. K Phos-Boost® or Meloxicam Oral Suspension treatment alone.
- A case study in a small dairy herd suffering from severe hypocalcemia and hypophosphatemia resulting in downer cows and mortality responded favourably to: Cal-Boost, K Phos-Boost® and a X-zelit (calcium binder).
- In conclusion, dairy cattle affected by anorexia/hypophosphatemia have demonstrated a more rapid recovery when supplemented with K Phos-Boost® along with the normal on-farm treatment protocol.

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In a pharmacokinetic study, Holstein cattle were treated post-partum with 2 x K Phos-Boost® boluses at hour 0, hour 24, and hour 48. The study gathered data from 5 control and 4 treatment animals.

## Serum Phosphorus Following Treatment with K Phos-Boost®



Phosphorus and potassium boluses can play an important role in increasing veterinary protocol compliance and restoring hypophosphatemic and hypokalemic serum levels in dairy cows. Solvet continues investigative research to consider the use of K Phos-Boost® boluses to support phosphorus and potassium serum levels in the following situations:

- Lameness (Foot rot)
- Chronic infections
- Metabolic disturbances (Ketosis, Down cows)
- Acidosis
- Sick Pens
- Stressed cattle
- Cattle off-feed

For more information on the studies referenced or to inquire about K Phos-Boost®, contact your veterinarian or your Solvet representative.

### References:

1. Vet Clin North Am Food Anim Pract. 2014;30:383–408.
2. Vet Clin Food Anim 30 (2014) 351–357.



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K Phos Boost at  
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