



## Feeding KemTRACE® Chromium 0.4% in a High-Producing, Robotically-Milked Jersey Herd in Ontario, Canada

### Introduction

Chromium (Cr) is considered an essential nutrient that improves insulin sensitivity.<sup>1</sup> Supplementing chromium to dairy cows has been shown to increase milk yield and enhance reproductive performance.<sup>2,3,4</sup> Recently, Cr propionate (KemTRACE® Chromium; Kemin Industries) has been approved for use as a chromium supplement in diets for dairy cattle in the U.S. and Canada, and it is important to evaluate the effect of chromium propionate supplementation when fed to high-producing Jersey cows.

### Materials and Methods

This field demonstration was conducted in a 90-cow commercial Jersey herd in Ontario, Canada that had not received Cr supplementation.<sup>5</sup> The demonstration was an all-off/all-on design that started February 15, 2017. The herd was housed in a freestall barn, and cows were milked via a robotic system. KemTRACE® Chromium 0.4% (KT Cr) was included in the diet at 1.5 g/cow/d to provide 6 mg of elemental Cr/cow/d to all lactating cows. Data were collected via the robotic milking system computer software for 10 months. Data on herd performance from the year preceding the demonstration was used for comparison.

### Results and Discussion

As this demonstration was an all-off/all-on demonstration with no control group for side-by-side comparison, statistical analyses cannot be conducted. However, milk yield appeared to increase in all lactations in the months following the start of chromium supplementation (Figure 1). Additionally, the average pregnancy rate (PR) from February through November of 2016 and 2017 were 23.7% and 26.3%, respectively, which would suggest that reproductive performance improved during chromium supplementation.

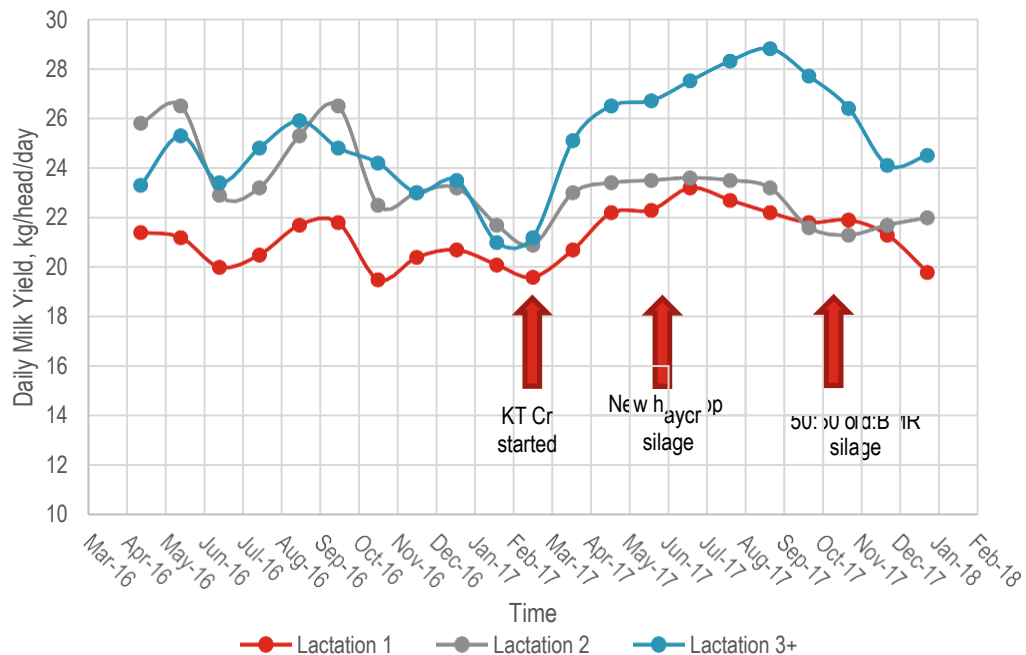


Figure 1. Average daily milk yield per cow per month by lactation.<sup>5</sup>

## Summary

Chromium supplementation increased milk production in a high-producing Jersey herd by 2 to 6 liters for all groups of lactating dairy cattle. During the 10 months of the demonstration, the pregnancy rate improved from 23.7% to 26.3%.

## References

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