

The effects of selenium source on the distribution of selenium within the milk of lactating mares

Darren Juniper¹, Carole Bassoul² and Gérard Bertin³

¹ School of Agriculture, Policy and Development, University of Reading, Reading, UK.

² ENSAIA, Laboratoire des Sciences animales, 54500 Vandoeuvre-Les-Nancy, France.

³ EU Regulatory Department, Alltech France, 14 Place Marie-Jeanne Bassot, 92300 Levallois-Perret, France.

Objective

To investigate the effects of Selenium (Se) source (Na_2SeO_3 vs. selenized yeast [Sel-Plex[®] (*Saccharomyces cerevisiae* CNCM I-3060)]) on the total Se content of horse's milk and the distribution of Se species.

Materials and methods

- 20 lactating horses randomly allocated to one of two dietary treatments that were identical except for Se source
 - SS – Na_2SeO_3 (0.63 ± 0.11 mg total Se/kg DM)
 - SY – Sel-Plex[®] (0.64 ± 0.11 mg total Se/kg DM)
- Diets were offered for a continuous period of 60 days with milk samples taken at T_0 , T_{15} , T_{30} , T_{45} and T_{60}

Results

- There were no differences between treatments at T_0 in milk total Se concentrations (Figure 1)
- At T_{15} total Se contents were higher ($P < 0.001$) in SY supplemented horses when compared to SS, a trend that continued throughout the study (Figure 1)
- Selenomethionine (SeMet) was the predominant Se species in SY milk at T_{30} and T_{60} (Figure 2)

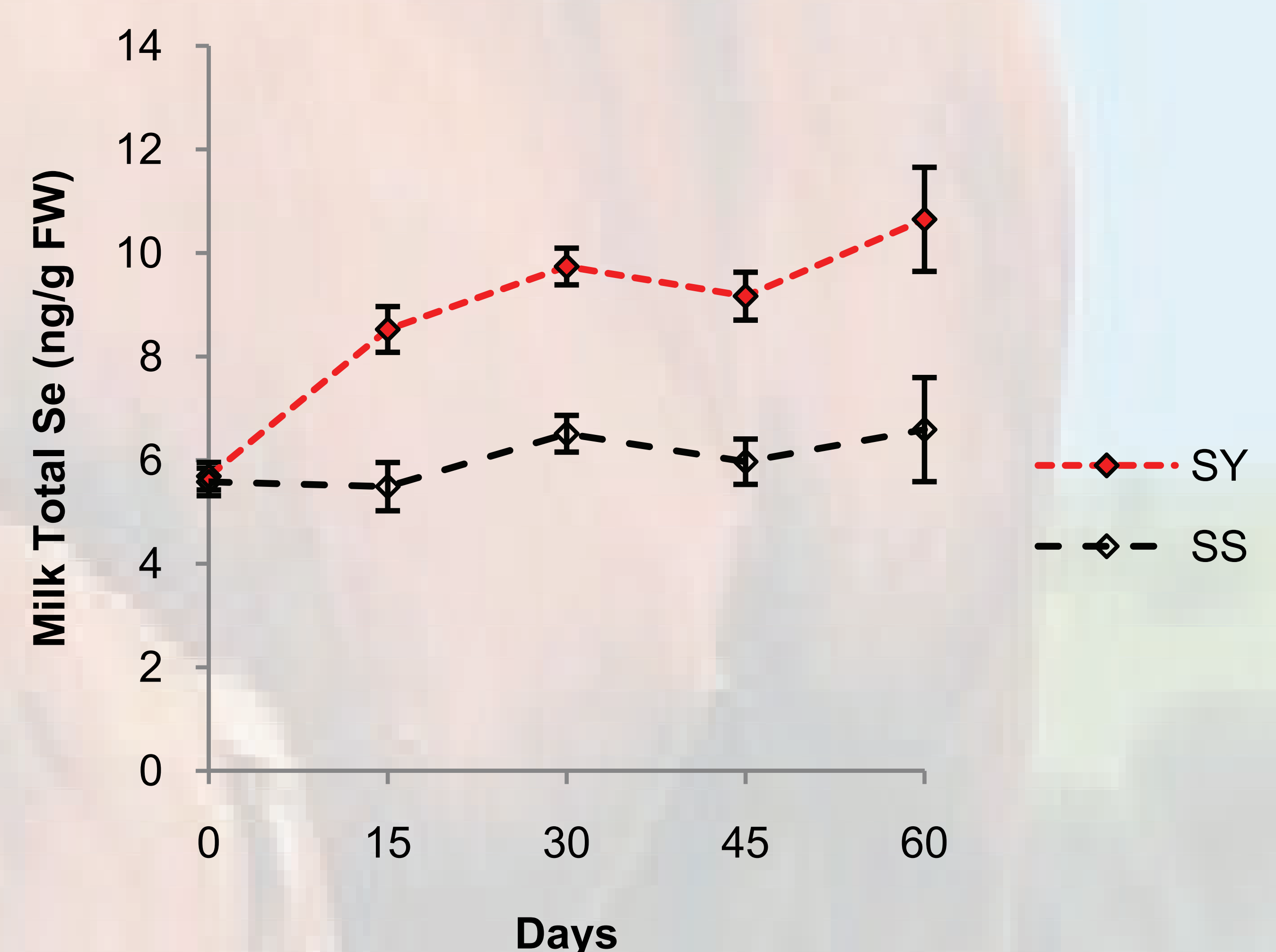


Figure 1 Total SE content of horses milk over time

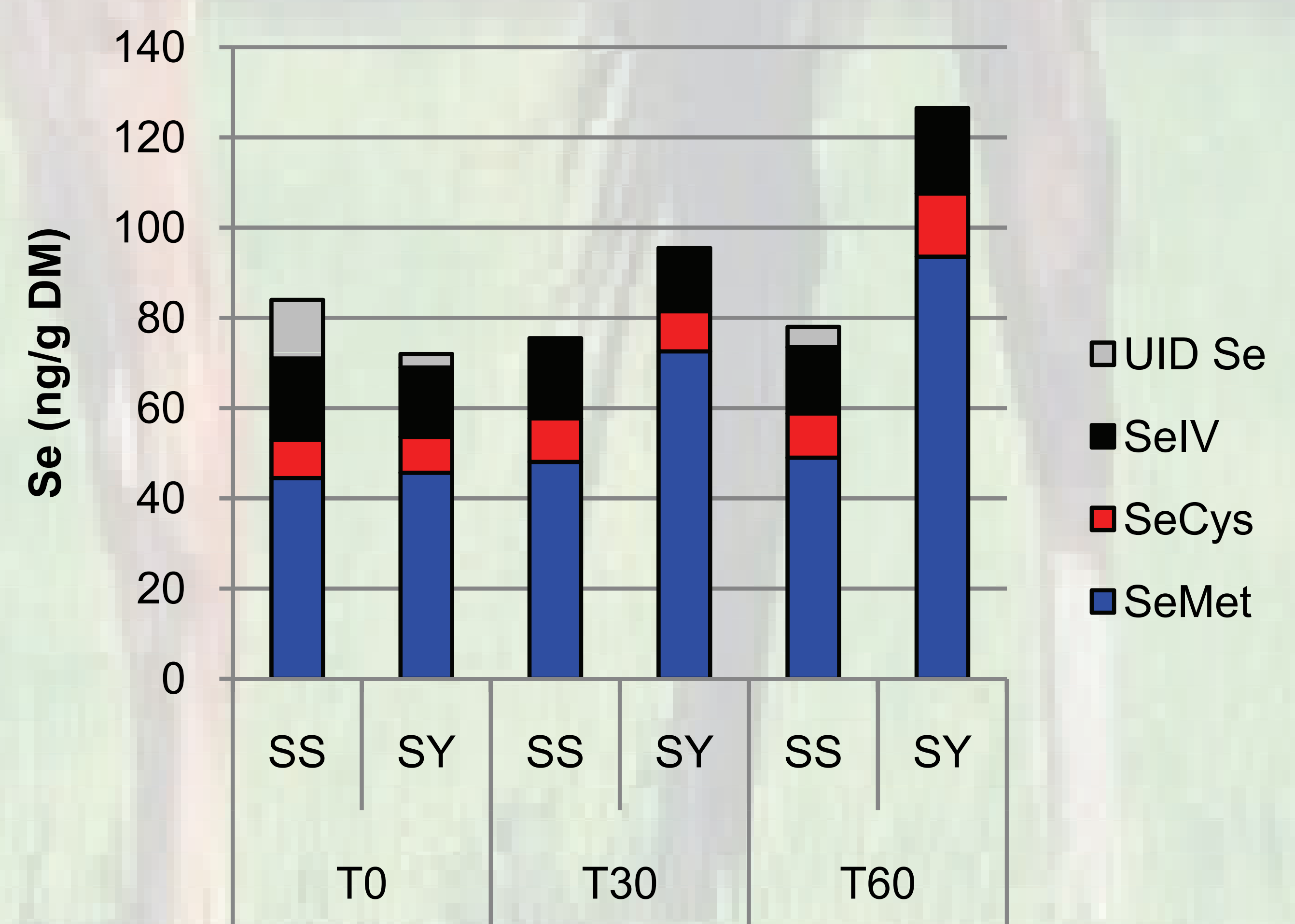


Figure 2 Speciation of horses milk at T_0 , T_{30} and T_{60}