TECH' INFO

ActiSaf

Heat stress management in high-producing dairy cows

Objective: Evaluate the effect of Actisaf® on high producing dairy cows (around 40 liters per day) during heat stress on zootechnical performances.

Trial design

Comparative experimental study.

Species/life stage

Lactating dairy cows in heat stress conditions.

Main criteria

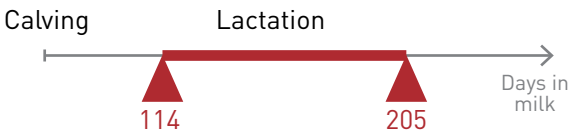
Milk yield, milk fat, milk protein, feed efficiency.

Reference

J. Dairy Sci.: 2009: 92: 343–351.

Protocol

	Control	Actisaf®
Dairy cows	21	21



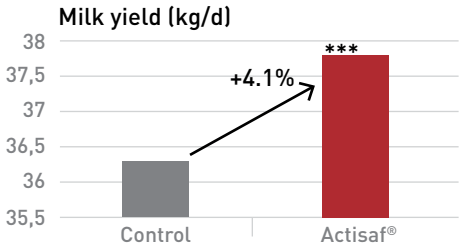
Main results

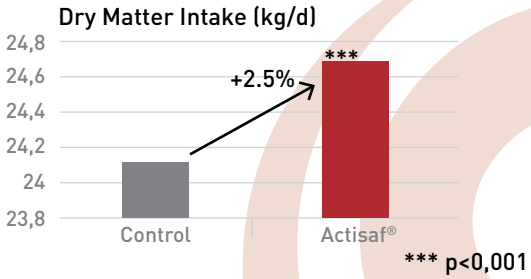
Feed intake: +2.5 %

Milk Yield: +4.1 %

Milk fat: +10.5 %

Feed efficiency: +3.6 %





Conclusion

Actisaf® supplemented to dairy cows in heat stress conditions increased feed consumption, milk quantity and quality and feed efficiency.

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R1501

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Introduction

The current study examined the effects of live yeast supplementation to dairy cows during the summer season on milk production, milk quality, feed intake and feed efficiency. Several benefits of yeast product supplementation to ruminant nutrition have been demonstrated: an increase in nutrient digestibility, alteration of the proportion of volatile fatty acids produced in the rumen, reduction in ruminal ammonia, and increase of ruminal microorganism population.

Material & methods

28 multiparous and 14 primiparous Holstein cows that averaged 114 ± 54 days in milk (DIM) were group housed in shaded loose pens with adjacent outside yards, equipped with a real-time electronic individual feeding system. The experiment was performed during the hot season.

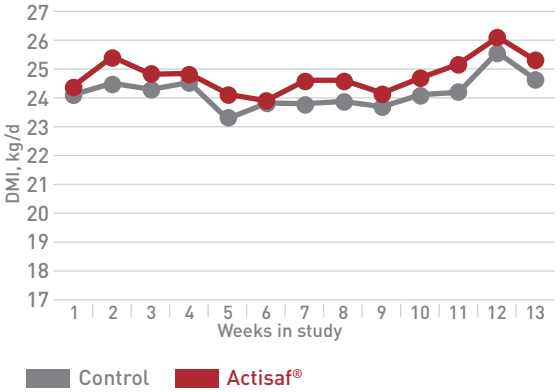
The treatments were as follows:

- **Control group**: cows were fed a basal diet and supplemented with 100 g of ground corn grain per cow per day
- **Actisaf® group**: cows were fed the basal diet and supplemented daily with 6 g of Actisaf® premixed with 100 g of ground corn grain.

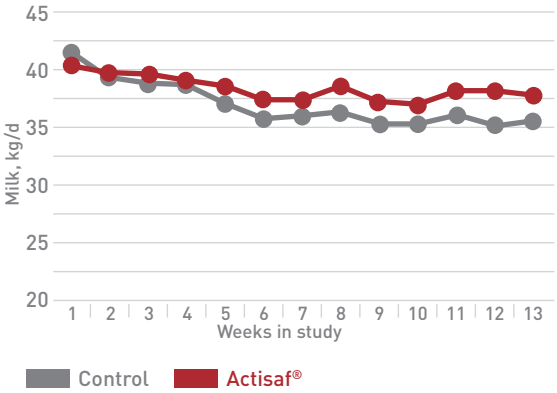
The maximal daily temperature during the study period averaged 31.2±1.6°C and the average maximal relative humidity was 83.6±5.7%. The temperature humidity index (THI) at morning (06:00 h) averaged 69.4±3.5, and the THI at afternoon (16:00 h) averaged 79.3±2.1.

Results and discussion

- The average daily dry matter intake (DMI) in the Actisaf® group was greater by 0.6 kg/d (2.5%) than in the control (p< 0.0001).



- The average daily milk production was 1.5 kg/d greater in the Actisaf® group than in the control group (+4.1%; P < 0.007).



- The fat yield was 7% greater in the Actisaf® group than in the control (p< 0.03).

- Feed efficiency as was defined by production of fat corrected milk at 4% (FCM 4%) from DMI was 3.7% greater in Actisaf® than in control (p< 0.03).

Indicator	Control	Actisaf®	p<
DMI, kg/d	24.1	24.7	0.0001
Milk, kg/d	36.3	37.8	0.007
FCM 4%, kg/d	32.8	34.8	0.0001
Fat g/d	1237	1368	0.03
Protein g/d	1172	1220	0.12
Lactose g/d	1810	1887	0.15
Feed efficiency			
FCM 4% per kg of DMI	1.36	1.41	0.03

Keywords Actisaf®, live yeast, heat stress, feed efficiency, milk yield, milk quality.

Reference U. Moallem, H. Lehrer, L. Livshitz, M. Zachut, and S. Yakoby, 2009. The effects of live yeast supplementation to dairy cows during the hot season on production, feed efficiency, and digestibility. J. Dairy Sci. 92:343–351.

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