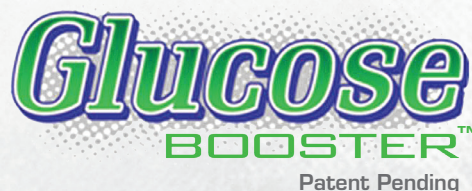


RESEARCH REPORT



Proven to increase milk yields and improve health in transition cows.

PRODUCT

For 20 years, Glucose Booster™ has provided a source of highly effective glucose precursors to dairy cows during the transition period before and after parturition.

Glucose Booster™ is made using a proprietary formula and process to add high levels of propylene glycol and glycerol to a dry carrier, along with adequate levels of niacin, calcium propionate and cobalt. These glucose precursors contribute to the cow's Krebs Cycle to produce extra glucose to the transition cow when the needs for glucose are greatest.

RESEARCHERS

Kelly Mitchell and Dr. Heidi Rossow



UC Davis School of Veterinary Medicine,
Teaching and Research Center
Tulare, California

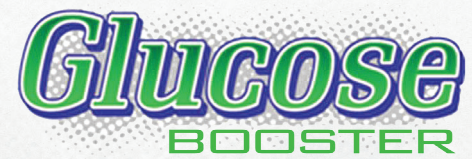
ABOUT

The purpose of the study was to determine if supplementation of transition Holstein cows with Glucose Booster™ increased blood glucose, decreased blood ketone bodies and reduced incidence of transition diseases (mastitis, metritis, displaced abomasum, and clinical and subclinical ketosis). The other purpose of the study was to determine if the supplementation with Glucose Booster™ increased milk, fat and protein production.

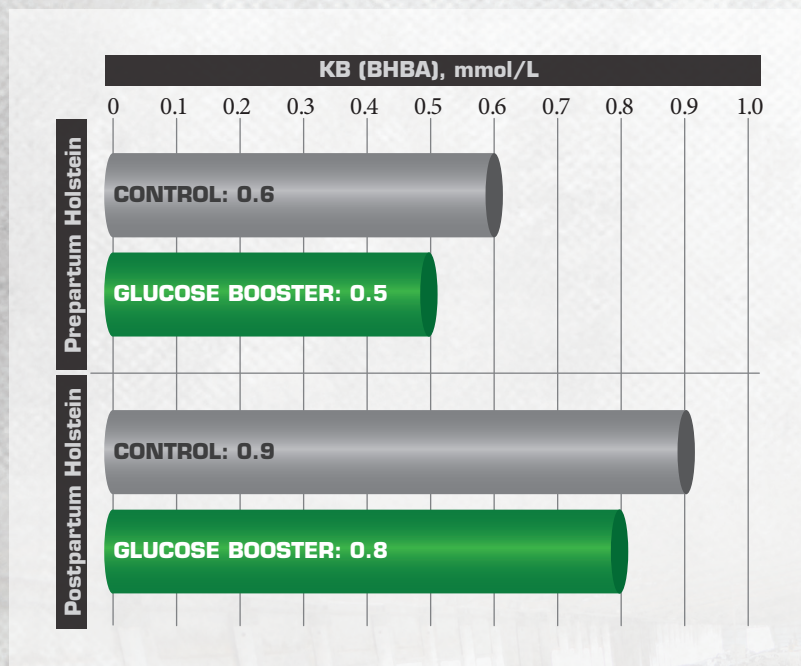
FINDINGS

Glucose Booster™ increased glucose, decreased BHBA and decreased the incidence of clinical and subclinical ketosis by 15 percent. Glucose Booster™ decreased the number of health incidents in the first 60 DIM. Glucose Booster™ greatly improved milk at 30 DIM, 60 DIM, 90 DIM and 120 DIM.





Research Proves Decreased Incidence of Clinical and Subclinical Ketosis



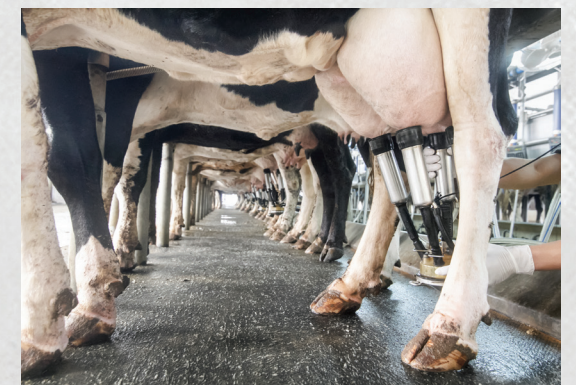
In this UC Davis study, Glucose Booster™-treated Holstein cows had a 15 percent reduction in instances of clinical and subclinical ketosis and experienced fewer health events than the control group (N gp=32, Nc=44) in the first 60 DIM.

Increased Milk Yields from 30 to 120 Days in Milk

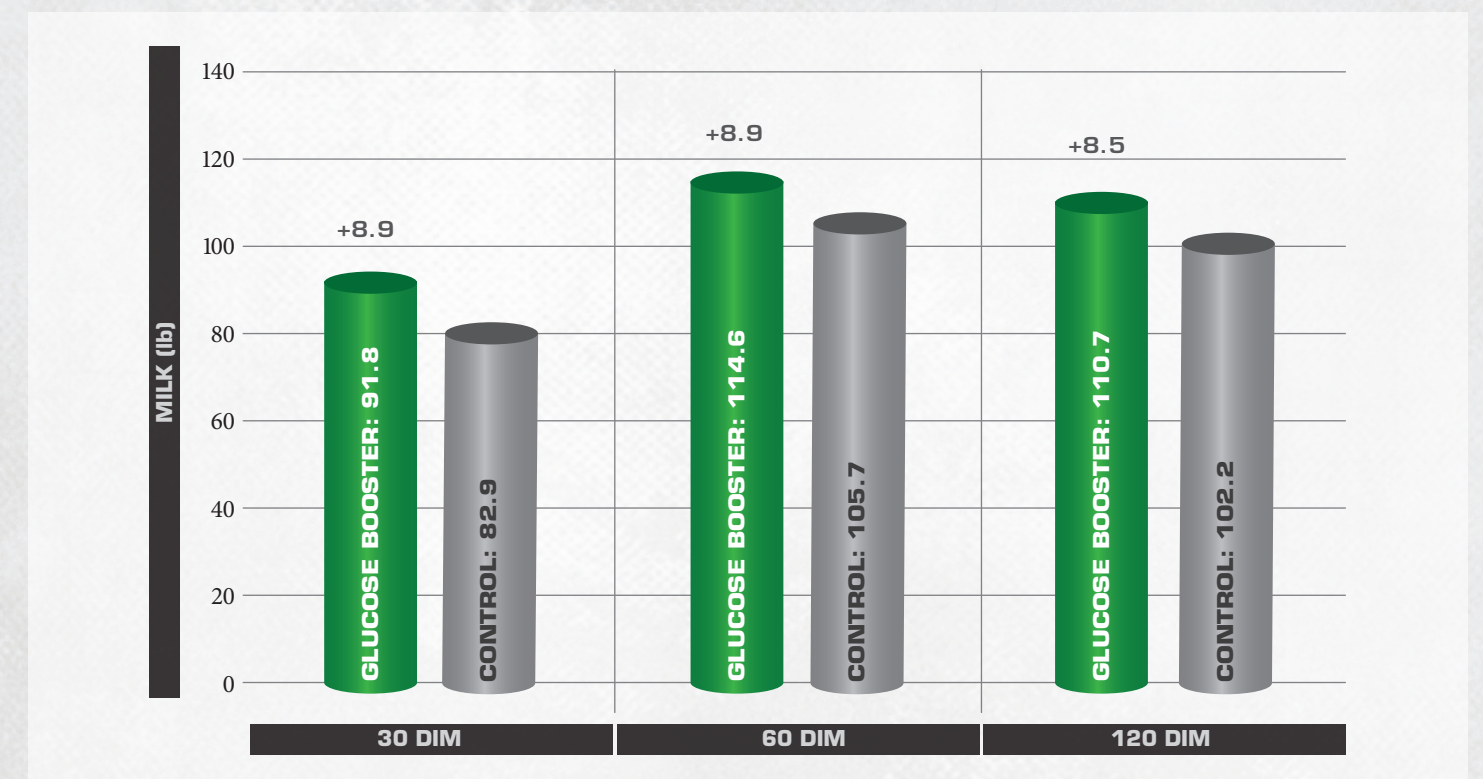
The study showed that Holsteins supplemented with Glucose Booster™ had higher milk, fat and protein yields than control cows during Glucose Booster™ supplementation and in the milking pens. The Glucose Booster™ was fed to the close up dry cow and to the early fresh cows when it was removed from the diet. Increased milk production continued after the Glucose Booster™ was removed at 60 DIM. The medium days fed was 25 DIM.

During the postpartum period, Holstein cows supplemented with Glucose Booster™ produced 9.21 pounds more milk, 0.49 pounds more fat and 0.26 more pounds of protein than the control Holsteins.

This increase in milk production continued after cows completed the trial and moved to high milking pens.



HOLSTEIN MILK PRODUCTION



Improved Cow Health

Category	Glucose Booster™	Control
Total Cows Fed	204	215
Total Cows Finished in Trial	105	106
Holsteins	52	54
Jerseys	53	52
Health Events¹		
Subclinical Ketosis ²	16	26
Deaths	4	7
Sold	13	17
ILL	3	2
DA	4	2
Low Milk	0	1
RP	2	4

¹ From a total of 419 Holstein and Jersey Cows

² Subclinical ketosis as defined as less than 60 glucose mg/dl higher than 1.0 BHBA mmol/l.

SUMMARY

Holsteins supplemented with Glucose Booster™ had:*

- Increased glucose levels
- Decreased subclinical and clinical ketosis
- Decreased health problems
- Significant increase in milk yield

* These positive results in milk production and health parameters were observed considering the diet contained a protected choline and Rumensin.

CONTACT US TODAY

To learn more about Glucose Booster™, call

Roger Stuhr (NE) 619-977-4567
Mike Maloney (CA) 707-484-5811
John Azzone (PA) 860-428-9286



505 West Main Street
Marshall, MN 56258
507-929-7811