



Focus on Healthy Calves

MULTIMIN® 90 - WHEN FEEDING TRACE MINERALS IS NOT ENOUGH!

↑ Immunity
↑ Antioxidant Status

↑ Calf Health

CORNELL UNIVERSITY STUDY DATA

Effect of an injectable trace mineral supplement containing selenium, copper, zinc, and manganese on immunity, health, and growth of dairy calves

A. G. V. Teixeira, M. L. S. Bicalho, A. Kussler, F. S. Lima, S. F. Lima, and R. C. Bicalho¹

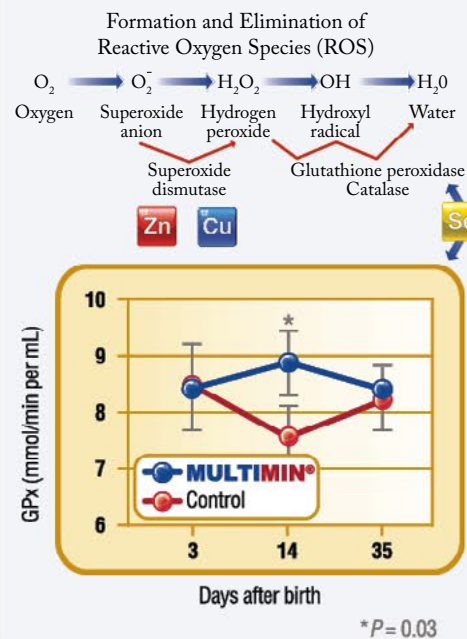
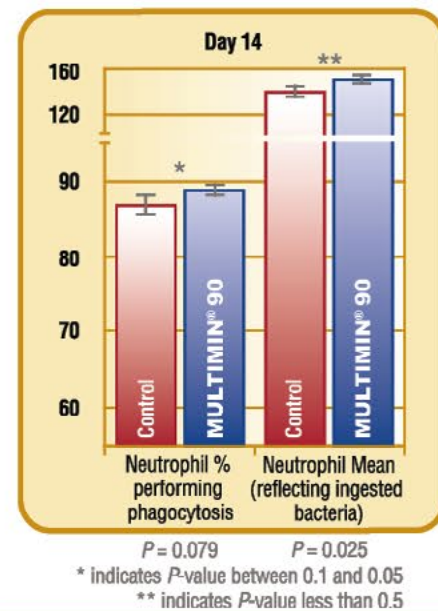
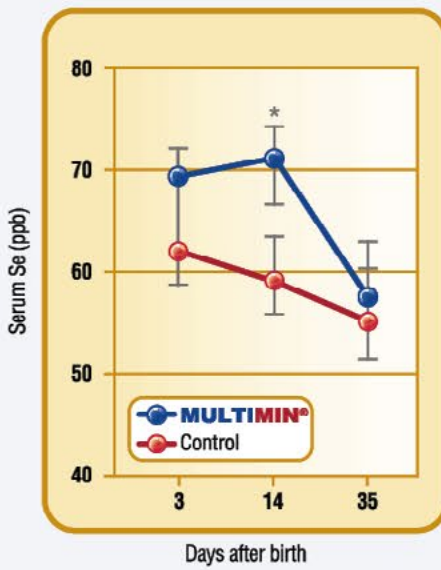
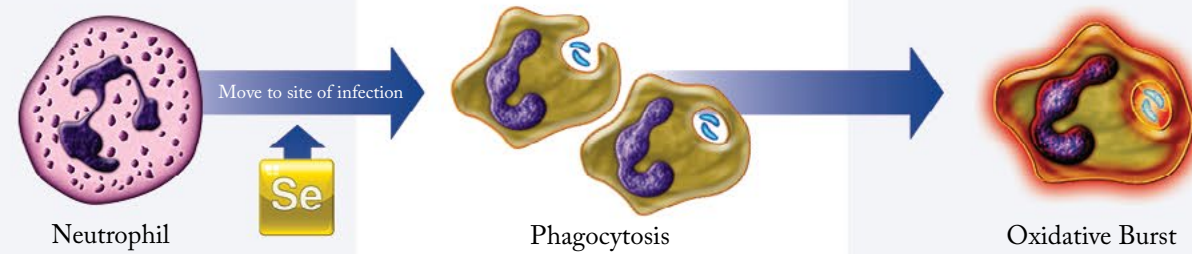
Brief Protocol:

- 790 Holstein Heifer Calves < **MULTIMIN®** – two subcutaneous injections – one at day 3 and one at day 30 after birth.
- Calves were fed raw **colostrum** (pooled and refrigerated) within 12 hours after birth.
- Calves were fed a total of 6L of **pasteurized non-saleable milk** divided equally twice per day.
- Water and **calf starter diets** were offered ad libitum starting at day 3 of life.
- IgG levels indicated successful transfer of passive immunity.
- Serum samples indicated that the calves were not deficient in Se, Cu, Mn & Zn at the start of the study.
- Weaning at day 45±5 after birth - Study period 50 days.

Study Results

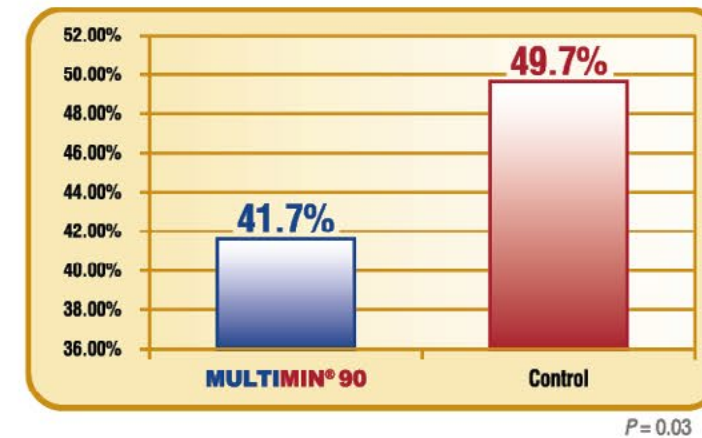
The study results indicated that **MULTIMIN® 90** at early postnatal life was beneficial to calves' **immunity** and **antioxidant status!**

Innate Immune Response

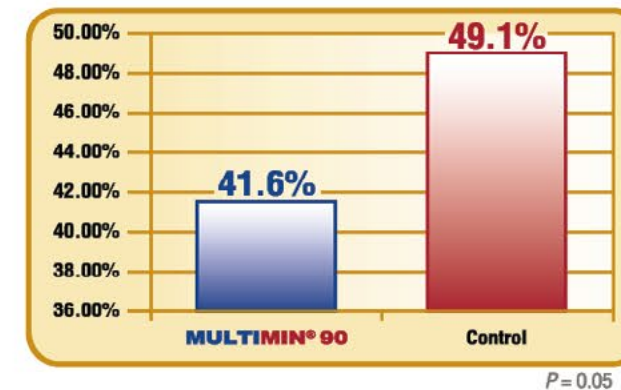


The study results indicated that **MULTIMIN® 90** at early postnatal life was beneficial to calf **HEALTH**

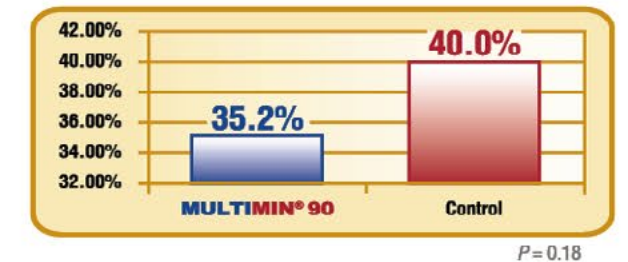
CALF SCOURS



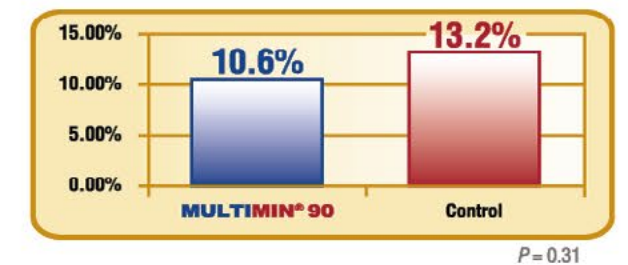
OTITIS/PNEUMONIA/ BOTH



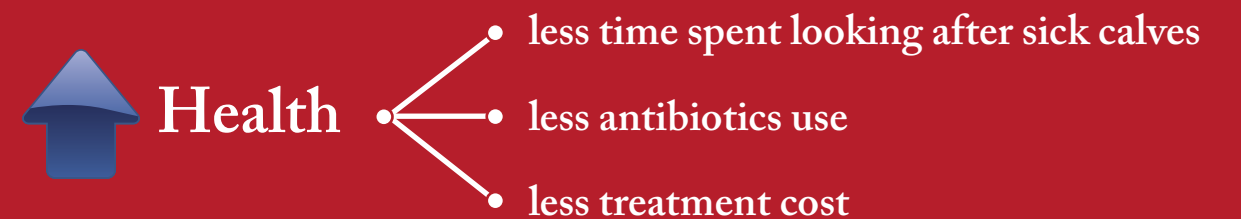
PNEUMONIA



OTITIS



THE BOTTOM LINE



University of Idaho Calf Study

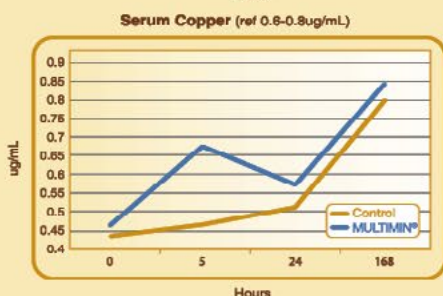
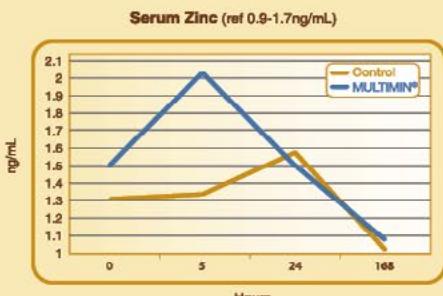
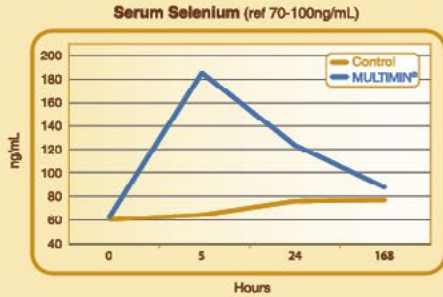
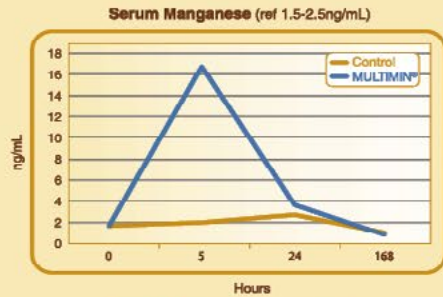
Brief Protocol:

- 58 day-old individually housed Holstein bull calves were randomly assigned to treatment and control groups.
- Pre-treated calves were injected with 1 mL of **MULTIMIN® 90**.
- Control calves were treated with saline.
- Serum was collected at 0, 5, 24 and 168 hours and analyzed.
- Calves were monitored for adverse reactions and injection site abnormalities.

Trial Results:

Trial study data indicated that injecting day-old Holstein calves with **MULTIMIN® 90** is a **safe** way of pre-treating calves with zinc, selenium, manganese and copper.

No adverse tissue reactions or any injection site abnormalities were detected in **MULTIMIN® 90** injected calves.



"MULTIMIN® DOESN'T COST - IT PAYS!"

With the dairy market like it's been, every dairy is looking for ways to improve profits and cut expenses. **MULTIMIN®** has helped us improve our calf and heifer program and it's here to stay!



Jackie Peck
Marks Farm | Lowville, NY

Complete trial data available on request

WWW.MULTIMINUSA.COM

KEEP OUT OF REACH OF CHILDREN

MULTIMIN® 90

An injectable aqueous supplemental source of zinc, manganese, selenium and copper

CAUTION: FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON THE ORDER OF A LICENSED VETERINARIAN.

ACTIVE SUBSTANCES PER ML:

Zinc..... 60 mg/mL
Manganese..... 10 mg/mL
Selenium..... 5 mg/mL
Copper..... 15 mg/mL

CAUTION:

Slight local reaction may occur for about 30 seconds after injection. A slight swelling may be observed at injection site for a few days after administration. Use standard aseptic procedures during administration of injections to reduce the risk of injection site abscesses or lesions.

OTHER SUBSTANCES:

Chlorocresol 0.1% w/v (as preservative).

DOSAGE RECOMMENDATIONS:

CALVES: Up to 1 year 1 mL/per 100 lbs. bodyweight
CATTLE: From 1-2 years 1 mL/per 150 lbs. bodyweight
CATTLE: Over 2 years 1 mL/per 200 lbs. bodyweight

DIRECTIONS:

This product is only for use in cattle. MULTIMIN® 90 is to be given subcutaneously (under the skin) ONLY.

It is recommended to administer the product in accordance with Beef Quality Assurance (BQA) guidelines. Minimum distance between injection sites for the MULTIMIN® 90 product and other injection sites should be at least 4 inches.

PRECAUTION:

Selenium and copper are toxic if administered in excess.

Always follow recommended label dose. Do not overdose.

It is recommended that accurate body weight is determined prior to treatment.

Do not use concurrently with other injectable selenium and copper products.

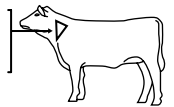
Do not use concurrently with selenium or copper boluses.

Do not use in emaciated cattle with a BCS of 1 in dairy or 1-3 in beef.

Consult your veterinarian.

Inject under the loose skin of the middle of the side of the neck. Max volume per injection site is 7 ml.

Subcutaneous injection in middle of side of neck.



Store Between 15°C and 30°C (59°F and 86°F).

SUPPLEMENTATION PROGRAM

BULLS	3 times per year
BEEF COWS	4 weeks before breeding 4 weeks before calving
DAIRY COWS	4 weeks before calving 4 weeks before insemination at dry-off
CALVES	at birth at 3 months and/or weaning
HEIFERS	every 3 months - especially 4 weeks before breeding

(program gives planned dates that can be varied to suit management programs)

DOSAGE TABLE

ANIMAL WEIGHT (lbs)	CALVES UP TO 1 YEAR 1 ml/100 lb BW	CATTLE 1 - 2 YEARS 1 ml/150 lb BW	CATTLE > 2 YEARS 1 ml/200 lb BW
50	0.5 ml	-	-
100	1 ml	-	-
150	1.5 ml	-	-
200	2 ml	-	-
300	3 ml	-	-
400	4 ml	-	-
500	5 ml	-	-
600	6 ml	-	-
700	7 ml	-	-
800	-	5.3 ml	-
900	-	6 ml	-
1000	-	6.6 ml	5 ml
1100	-	-	5.5 ml
1200	-	-	6 ml
1300	-	-	6.5 ml
1400	-	-	7 ml

Packaged in 100 mL & 500 mL size

NDC No. 49920-006-01
NDC No. 49920-006-05

TAKE TIME OBSERVE LABEL DIRECTIONS



MANUFACTURED FOR:
MULTIMIN
NORTH AMERICA, INC.
Fort Collins, CO 80528

