ROVIMIX® β-Carotene

The first step towards optimum fertility in dairy cows

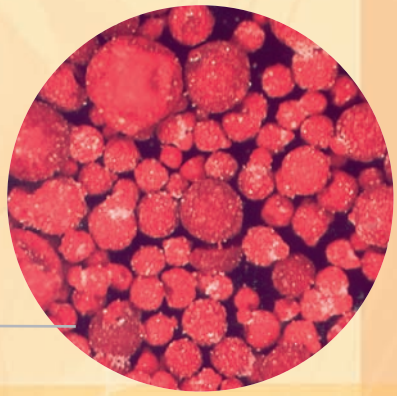
a DSMProduct

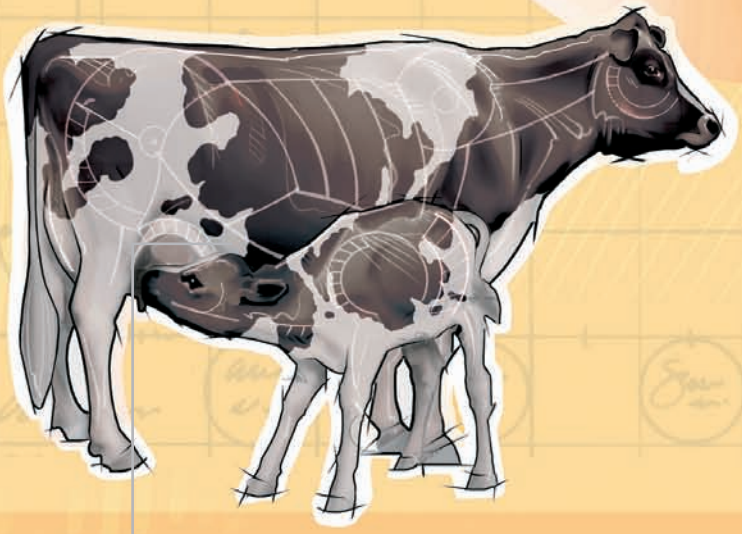
DSM Nutritional Products

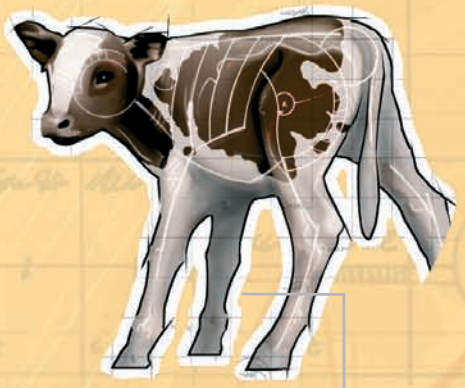
Unlimited. DSM

Advantages of ROVIMIX® β-Carotene

- Superior product quality
- Outstanding mixability







Dairy cows

- Supports optimum fertility
- Enriches β-Carotene in the colostrum

Calves

- Supports optimum calf health

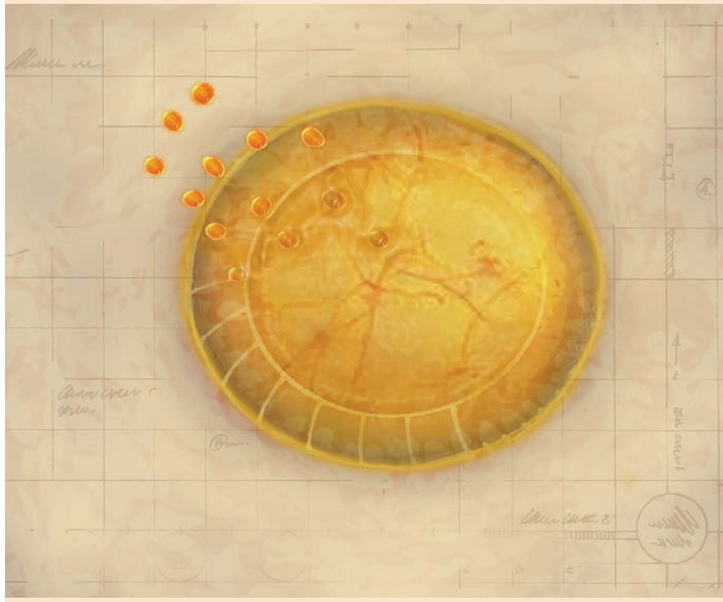
Problems

- Weak or silent oestrus
- Delayed ovulation
- Low progesterone concentration
- Low fertility index
- Early embryonic losses
- Diarrhoea and pneumonia in calves

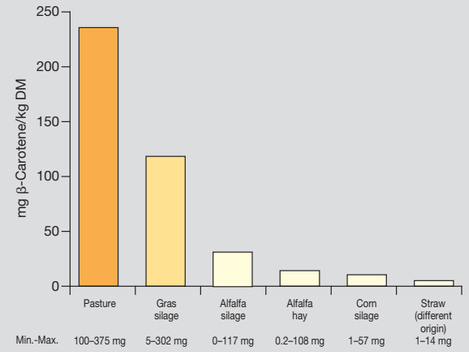
Product Benefits

- Penetrates the follicle
- Improves follicle quality
- Precursor of vitamin A in the follicle
- Mode of action is independent of vitamin A
- Improves fertility rate
- Reduces service interval
- Protects the mucosa

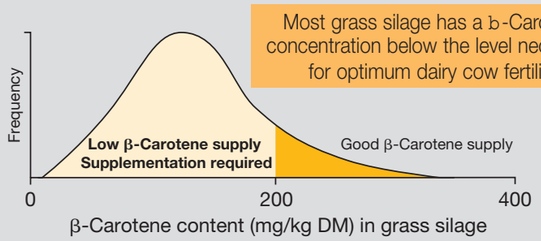
Penetration of lipoprotein bound β-Carotene into the follicle



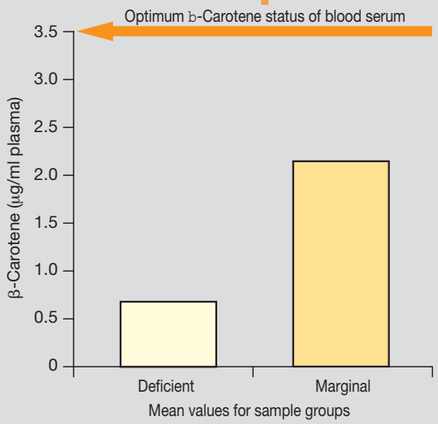
β-Carotene content in forage and blood samples – Survey results –



- Forage has a wide and unpredictable β-Carotene concentration
- Corn silage has a negligible β-Carotene concentration



The β-Carotene content of grass silage should exceed 200 mg/kg DM to fulfill the β-Carotene requirement of cows in early lactation.



Plasma samples were taken during the dry period and early lactation from dairy cows fed maize silage based diets. The average β-Carotene content was 1.1 µg/ml which is significantly below the suggested optimum level of > 3.5 µg/ml. 75% of samples were classified as deficient, 23% were marginal and only 1% were in the optimum range.

Effect of supplementary ROVIMIX® β-Carotene on pregnancy rate in dairy cows

		Pregnancy rate		
Treatment	Interval from calving to first AI	At first AI	90 d postpartum	120 d postpartum
	d	% of cows pregnant		
Control	76.8	9.3	9.4	21.1
b-Carotene 400 mg/d for ≥ 90 d	79.4	14.6	12.9	35.4*

** p < 0.05*

Aréchiga et al., 1998; University of Florida

For more information on herd assessment of β-Carotene status, please contact DSM Nutritional Products

Economics

Reported field trials

	b-Carotene mg per head per day	Costs per cow per year €	Return on investment
Improved fertility and calf health	500	30	5 : 1

Feeding

Recommendations

OVN OPTIMUM VITAMIN NUTRITION

Supplementation Guidelines

	β-Carotene mg per head per day	ROVIMIX® β-Carotene 10% mg per head per day	When
Dairy cows	300-500	3000-5000	28 days prior to calving until pregnancy is confirmed
Calves (milk replacer)	100	1000	For the first 3 weeks of milk feeding

DSM

Why DSM Nutritional Products?

DSM Nutritional Products is a pioneer in the synthesis and production of vitamins. Today we are the leading supplier of vitamins for both animal and human nutrition. All our products are manufactured under strict control and in modern facilities that exceed the requirements for environmentally safe production.

Our 'Feed for Food' focus means that quality, safety and traceability are an important feature of our products. With our innovation programme, we are able to deliver outstanding nutritional solutions to meet customer needs.

Why ROVIMIX® β-Carotene?

Numerous field trials confirm scientific studies that ROVIMIX® β-Carotene supports optimum fertility in dairy cows and benefits calf health. Combined with superior product formulation technology, ROVIMIX® β-Carotene is the product of choice for effective β-Carotene supplementation for all species.

DSM Nutritional Products Ltd
Bldg. 241/834
Wurmisweg 576
CH-4303 Kaiseraugst · Switzerland

vma.dnp@dsm.com
www.dsmnutritionalproducts.com