Dosages EMAL liquid and EMAP powder (Ruminants)

Dairy cows	Transition cows	High production cows	"Drench"
EMAL liquid	150-250 g/cow/day	250-500 g/cow/day	500-1,000 g/cow/day
EMAP powder	100-200 g/cow/day	200-400 g/cow/day	400-800 g/cow/day

Sheeps and goats	1 month pre-partum	High production
EMAL liquid	10-15 g/animal/day	20-30 g/animal/day
EMAP powder	8-12 g/animal/day	15-25 g/animal/day

Calves	After diarrhea	Days before slaughter
EMAL liquid	50 g	1,000 g for 3-5 days
EMAP powder	40 g	800 g for 3-5 days

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EMAL liquid and EMAP powder

Special energy for our animals

MIRAVIT

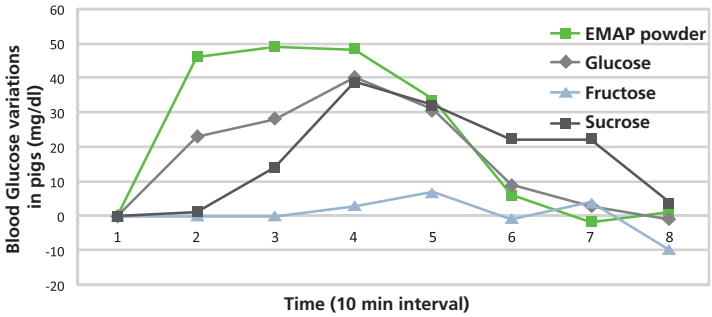
Keeps your animals fit.

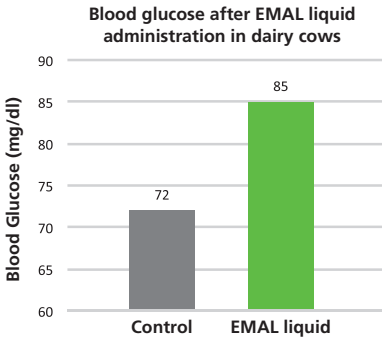
What are EMAL liquid and EMAP powder?

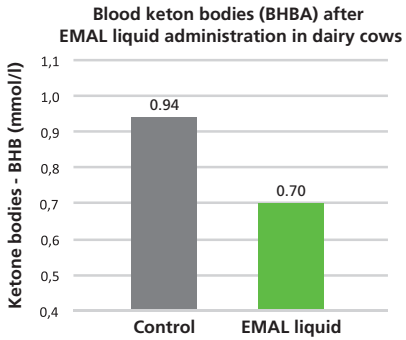
- Liquid (EMAL) or powder (EMAP) blend of specific diversified soluble sugars
- Main sugars are maltose (44%) and maltodextrines (30%)
- Derived from enzymatic extraction of barley starch

Why use EMAL liquid and EMAP powder?

The unique features allow to better support nutritional, metabolic and microbiological needs of modern high productive animals.







Advantages of EMAL liquid and EMAP powder

1. Provides energy
2. Rises the feed intake (improves palatability)
3. Prebiotic effect on rumen microflora

- Better energy balance and prevention on metabolic pathologies
- Positive impact on reproductive parameters

	EMAL liquid/ EMAP power	Glycerol	Propylene glycol
Active principle	Mix differentiated sugars	Polyalcohols	Polyalcohols
Palatability	Yes (very high)	Yes	No (decrease ingestion)
Energy (MJ NEL/kg)	12.4	8.3-9.5 (Schroder et al.)	11.75 (Mikula et al.)
Energy (ATP/Molecule)	38.0	21.0-22.0	9.0-14.5
Prebiotic activity	Yes (high)	No	No
Intestine	No transition alteration	Irritating, increase speed transit (laxative)	Slightly laxative
Origin–Quality	Food	• By-product of ethanol production • Quality depends on purity	Chemical industry source
Adverse effects	None	• Reduction of fiber digestibility • Industrial waste (methanol, potassium) • Laxative	• Not palatable • Reduction of feed intake • Slightly laxative

Composition of sugars

	No. of molecules	%
Fructose	1	1.0
Glucose	1	11.2
Maltose	2	44.2
Maltotriose	3	13.4
Dextrose	>4	30.2