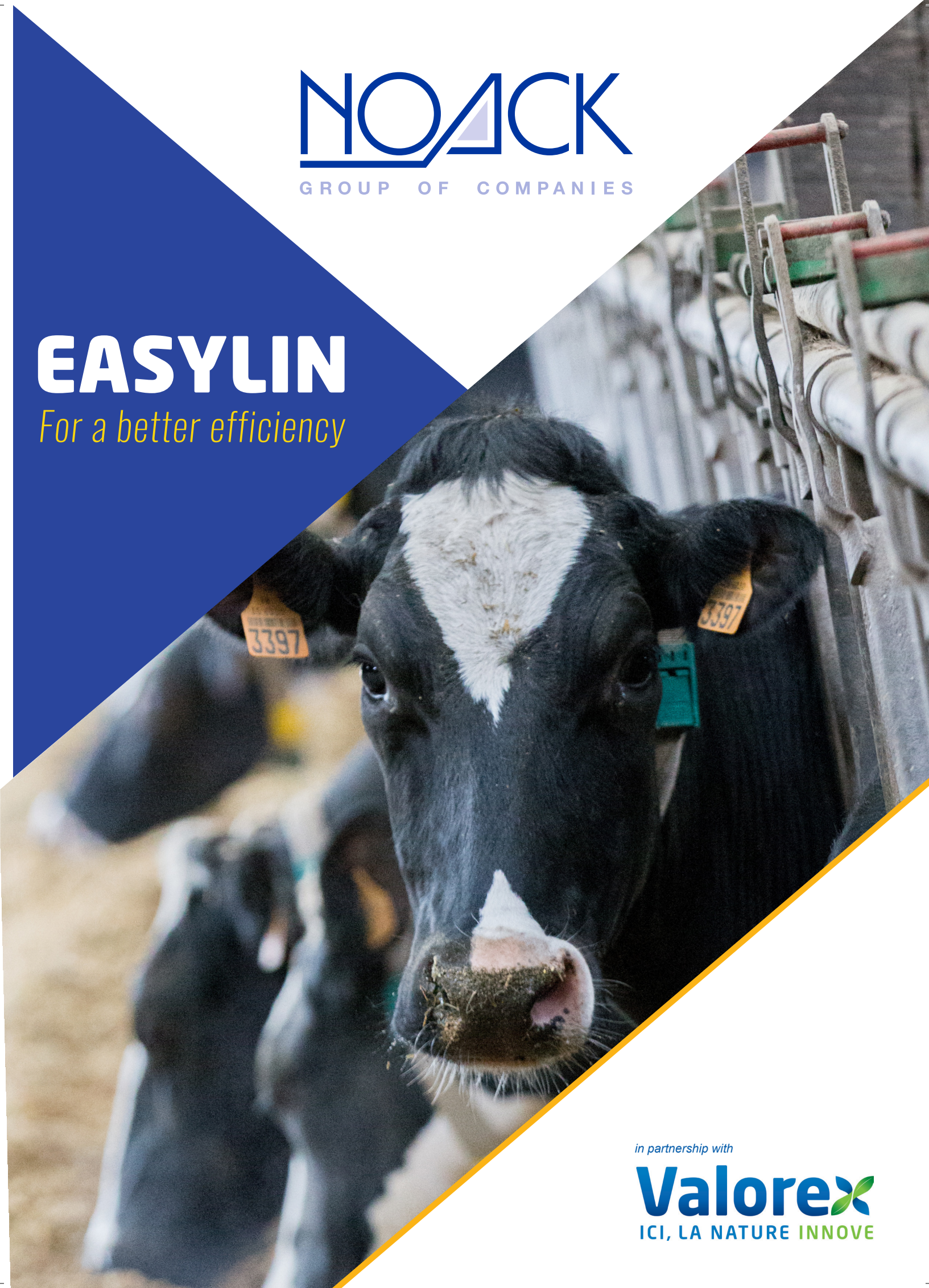


NOACK

GROUP OF COMPANIES

EASYLIN

For a better efficiency



in partnership with

Valorex
ICI, LA NATURE INNOVE

LACTATION

"Omega 3 from EasyLin is a promise of health, fertility and milk persistency "

So much time and labour are necessary to breed productive cows. During this time many things can put a sudden end to the cow's career. Keeping cows at the top performance level is a daily challenge for all farmers. And everybody will agree that the most stressful and riskiest period of lactation is around calving. But this period will condition the success of the following lactation.

HOW CAN YOU SAY THAT COWS HAVE HAD A GOOD LACTATION?

- ✓ Achieve their **full milk potential and an optimum lactation** curve with a high peak and good persistency,
- ✓ **Trouble free calving**, no metabolic diseases after calving,
- ✓ A short calving interval with **early pregnancy**,
- ✓ 100 days after **calving** cows **produce** 50% of the milk production and are pregnant **again**.

Many benefits:

- ✓ *Satisfaction, pride, feeling of a job well done,*
- ✓ *Less work, less stress, less worries,*
- ✓ *Better profitability and sustainability.*



...BUT IN REALITY, IS IT REALLY LIKE THIS?



Calving, negative energy balance...

↗ metabolic disorders, ↗ acidogen concentrates, ↘ body condition

↗ fertility disorders, ↘ milk yield, ↗ calving interval, ↗ fatty cows...

Reduce income and farmer's welfare

WHAT ABOUT LISTENING TO NATURE?

Over the last 50 years, **we have changed the feeding practices of dairy cows** and livestock in general. The typical diet of a cow is composed of **corn silage, soya bean meal, wheat and no longer grass, beans, peas and lupine** as it was. The traditional way of feeding has gone.

The **consequences are more important** than we could have thought. **We are what we eat!** Changing the diet of livestock created an imbalance in animal products consequently leading to human disorders (obesity, cardiovascular diseases, cancers, cerebral disorders...).

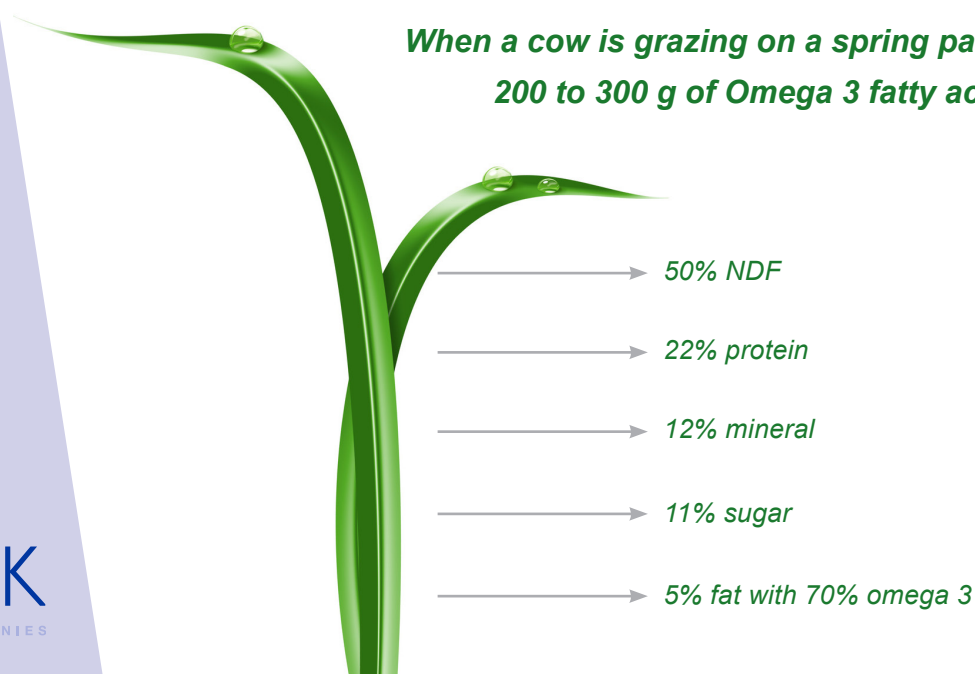
In the late 90's, **a farmer in Brittany observed that his cows pasturing early spring grass were in good health**, and showed **good reproduction performance** combined with **high milk yield**. He wanted to understand why. Working with Valorex, he looked in detail to find out what was so special with this spring grass.

On top of a very high protein content, **fat is a very important part in the composition of spring grass**, up to 10%, and 65-70% of **this fat is Omega 3 fatty acids**.



The balance of fatty acids in the cow diet **has a real impact on cow performance** in general. **And as the milk is consumed by humans, it also has an impact on human health.** The idea of Valorex was to reproduce the effect of spring grass over the whole year, with a specific source of Omega 3 fatty acids, linseed.

When a cow is grazing on a spring pasture, she can eat 200 to 300 g of Omega 3 fatty acids per day.



HEALTH

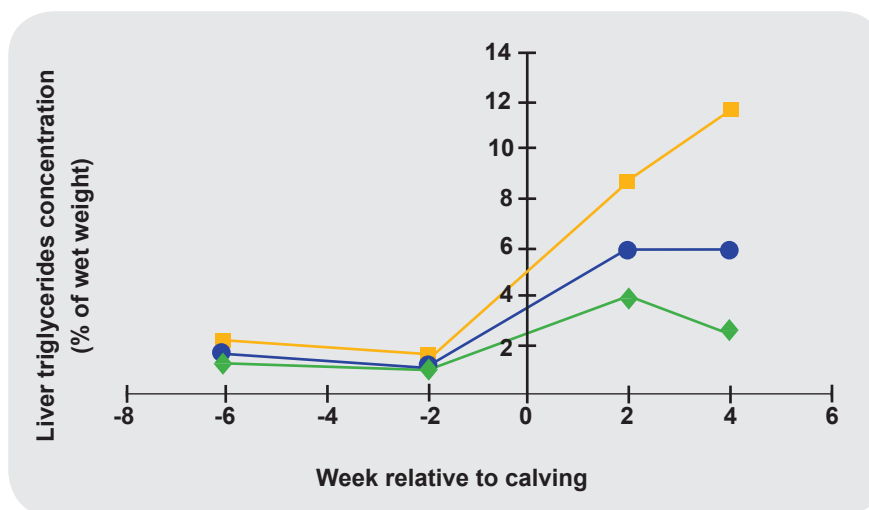
Around calving the feed intake capacity decreases and at the same time energy and protein needs have greatly increased for milk production. Cows face a negative energy balance and start to mobilize their body reserves.



HOW TO PREVENT FATTY LIVER AND IMMUNE DEPRESSION?

- **Manage the body condition** at the end of lactation and during the dry period,
- Avoid a **negative energy balance** around calving,
- Support **liver health** with a low triglycerides rate and a high glycogen level (fast energy storage).

EFFECTS OF ADDING EASYLIN DURING THE TRANSITION PERIOD



Petit, 2011

M-CO (Control without fat)

M-EB By-pass fat (fat)

M-FL (Linseed addition)



EasyLin's benefit

EASYLIN and its Omega 3 fatty acids improve the health status of the liver for a better natural immune response, fertility and milk production.

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KETOSIS

Ketosis is the cow's response to a negative energy balance. Cows don't obtain the energy that they need from the diet or a problem stops them from eating enough (diseases, integration in the herd, heat stress...). This metabolic disorder is not very visible and often underestimated.

**DETERIORATION
IN FERTILITY**

**DROP IN MILK
PRODUCTION**

**LOSS IN BODY
RESERVES**

HOW TO DIAGNOSE IT?

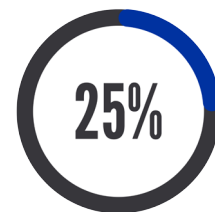
- First month of lactation:
Butter Fat / Protein > 1.4-1.5 or
Protein < 2.8% for Holstein
- Analysis of the Beta Hydroxy Butyrate in the **blood (>1.2 mmol/l), milk or urine.**



Ketosis costs between €250 and €600 per cow and per lactation, direct and indirect costs.

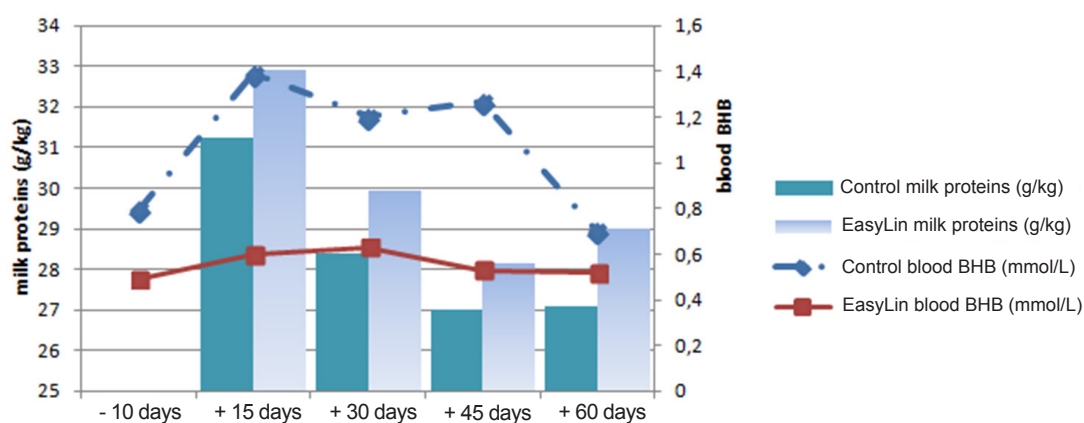
HOW TO PREVENT KETOSIS?

- Focus on dry and transition cows
(body condition score, keeping the volume of the rumen during the first part of the dry period, preparation for the lactation diet...)
- A very **well-balanced and palatable diet** in fresh group.



Ketosis is frequent and underestimated. More than 25% of cows are affected.

EFFECTS OF ADDING EASYLIN 15 DAYS BEFORE CALVING



Trials on commercial farms, EasyLin added only during close up period, no propylene glycol used in both groups.

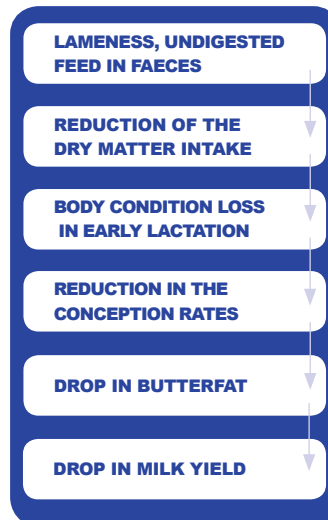


EasyLin's benefit

EasyLin and its Omega 3 fatty acids reduce the risk of Ketosis for a better start of lactation!

ACIDOSIS

In the rumen, bacteria break down feed to produce Volatile Fatty Acids (VFA) which are absorbed and utilized by cows as source of energy. When the amount of the VFA produced exceeds the amount that can be absorbed from the rumen, SARA (Sub-Acute Ruminal Acidosis) occurs. SARA causes subtle but significant economic losses, underestimated in most farms (milk production, vet medicines, poor fertility, culling).



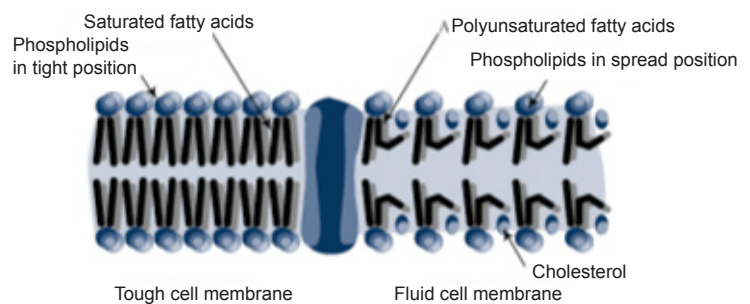
HOW TO PREVENT ACIDOSIS?

- Reduce the amount of acidogen concentrates. **EASYLIN** is a non-acidogen and concentrated source of energy.
- Add straw or hay to encourage chewing which in turn produces saliva which neutralizes the acid.
- Buffer supplements can be added to the diet to help neutralizing the acids.

EFFECTS OF EASYLIN ON SARA



What are the signs?



EasyLin's benefit

EASYLIN and its Omega 3 fatty acids reduce the risk of acidosis and SARA for a better milk yield and less lameness.

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FERTILITY

Poor reproductive performance of a dairy herd is one of the major causes for lost income for dairy producers. As they are indirect costs, they are often overlooked.

The reasons are numerous and diverse. One of the explanations is the too high Omega 6 / Omega 3 ratio in the cow diet. Due to feeding mainly with corn, soybean meal, sunflower, this creates an imbalance. Cows eat too much Omega 6 and not enough Omega 3 nowadays. Both are essential but they have to be in the right balance:

INABILITY TO DETECT COWS IN HEAT

NUMBERS OF AI PER COW

COSTS OF THE HORMONAL TREATMENTS

HIGH CULLING RATE, NUMBER OF LACTATIONS

CALVING INTERVAL TOO LONG



Maize and soya diet:

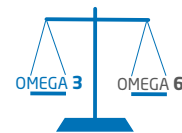


TOO MUCH OMEGA 6 COMPARED TO OMEGA 3:

- Hormonal imbalance
- Inconspicuous heat
- Embryo mortality



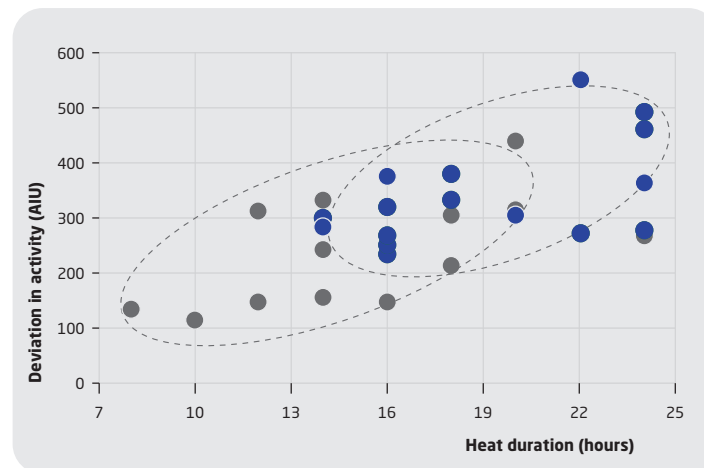
EasyLin diet:



RECOMMENDED BALANCE BETWEEN OMEGA 3 AND OMEGA 6:

- Balanced hormone synthesis
- Expression of heat
- Good maintenance of the embryo

“A cow in a better shape shows a stronger oestrus, you save time!”



● EasyLin

● Control (Palm fat)

zachut et al. (2011)



EasyLin's benefit

EasyLin and its Omega 3 fatty acids improve the cow's fertility, reduce the calving interval and the culling rate and improve the sustainability of the farm.

MILK PRODUCTION

EASYLIN and Omega 3 have already improved the health status, the fertility, decreased the risk of ketosis and SARA. The cow is now in optimal condition to show her milk potential!

Omega 3 fatty acids, these small molecules, will also decrease the methane emission, methane produced by the cow during the ruminal fermentations.

WHAT IS THE BENEFIT OF REDUCING METHANE EMISSIONS?

Plant material
(Mainly cellulose)

EasyLin input will promote propionate production as a glucose precursor, a part of the Omega3 fatty acids will go directly to the udder.

Fermentation of VFA
C2-C4 → C3

By less Methane output, reducing Acetates and Butyrates, less saturated fatty acids produced in the udder.

Methane
(Loss of energy)

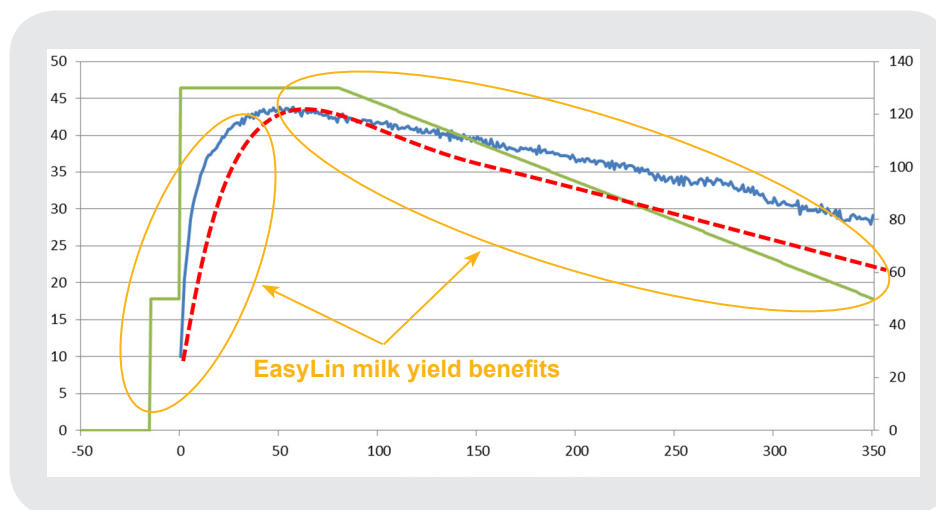
Reduce energy loss so more energy available for milk production and protein.



Up to 15% of Methane can be reduced!⁽¹⁾

(1) CIP's project is recognized by the UNO.

EASYLIN'S EXTRA-VALUE IN COMPARISON WITH STANDARD LACTATION⁽²⁾



— MY with EasyLin (Kg/cow/ day) - - - Standard MY (Kg/cow/day) — its (g/cow/day)

⁽²⁾ average of 255 cows (4 farms)



EasyLin's benefit

EasyLin and its Omega 3 fatty acids increase milk production, up to 1.5-2 liters per day and per cow.

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BUTTER FAT

In literature it has been demonstrated that extruded linseeds can decrease butterfat. But in these trials the linseed dosages were 2 to 3 times higher than the recommended dosage of EasyLin. And moreover, the diets included only corn silage as main forage. This has a direct impact on the intake and the fat content as well.

BUTTERFAT CAN DECREASE WITH LINSEED FEEDING IF:

- The corn silage is strongly dominant in the diet without grass or alfalfa silages or with a nondigestible fiber,
- The diets tend towards acidosis.

Adding linseed on top of corn silage, brewery grains, soybean meal could increase the C18:1 trans production from C18:2 and C18:1 and have a negative impact on the butterfat.

HOW TO KEEP A HIGH BUTTERFAT CONTENT:

- **Increase the source of digestible NDF Hemicellulose.**

They are fermented faster and produce acetate, butterfat precursor,

- **Limit the Omega 6 intake.**

They are precursors of trans fatty acids, responsible for the fat depression syndrome (soybean oil, breweries, corn grain, rapeseed oil or protein concentrates rich in Omega 6),

- **Reduce the acidosis for risk:**

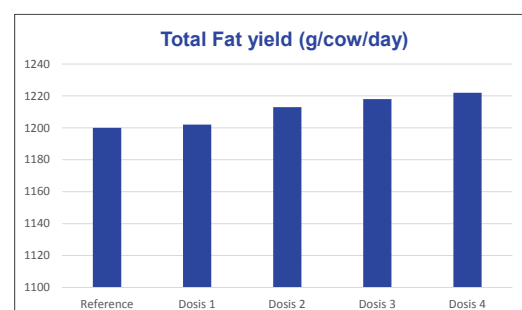
Decrease the wheat and triticale input and control the buffer supplement input, DACB, potassium,

- **Guarantee the homogeneity of the mixture**

To avoid sorting, along the trough, and from one day to another.

Results of a recent study on 1204 dairy herds using EASYLIN in France for some months between 2008 and 2016. The average effect of this study is simulated on an average herd with 30 L of milk, 4% of fat and 3.3% of protein:

	Milk yield	Fat content
Reference	30	4
Dose 1	30.04	4
Dose 2	30.6	3.97
Dose 3	30.8	3.95
Dose 4	31	3.94



PRODUCT RANGE

EASYLIN

For a better efficiency

EasyLin is a unique feed guaranteed by linseed selected for their high concentration in Omega 3 and by Valorex specific and patented extrusion process. Beside its high Omega 3 fatty acids content, EasyLin is rich in energy and protein. It has a guaranteed fat and Omega 3 content similar to spring grass and it rebalances the Omega 6 / Omega 3 ratio.



EASYLIN 100/30 PROTECT

61% Linseed - 39% Rapeseed meal

Dry matter	90%	NEL	15.4 MJ/Kg
Crude Protein	26%	UDP	33%
Crude Fat	25%	nXP	182 g/kg
Crude Fiber	9%	Omega 3	136 g/kg
Starch / Sugar	4.0% / 5.0%	Omega 6	38 g/kg
IT3 (GM)		94 g/kg	

EASYLIN 100/50/NPN PROTECT

61% Linseed - 23% Rapeseed meal - 9% Urea - 7% Rye

Dry matter	90%	NEL	15.7 MJ/Kg
Crude Protein	48%	UDP	33%
Crude Fat	25%	nXP	267 g/kg
Crude Fiber	7.0 %	Omega 3	136 g/kg
Starch / Sugar	6.0 % / 4.0%	Omega 6	38 g/kg
IT3 (GM)		94 g/kg	

EASYLIN 60 PROTECT

60% Linseed - 40% Wheat bran

Dry matter	90%	NEL	14.6 MJ/Kg
Crude Protein	18%	UDP	22%
Crude Fat	25%	nXP	114 g/kg
Crude Fiber	8%	Omega 3	136 g/kg
Starch / Sugar	8.0% / 4.0%	Omega 6	38 g/kg
IT3 (GM)		94 g/kg	



EasyLin can be included in a pelleted concentrate for milking robot.
Please, for more information, ask your Noack advisor.

RECOMMENDATIONS

WHAT IS **it3**?

it3 is the Omega 3 Technical Index. This formulation criterion is used to characterise the quantity and availability of the Omega 3 type fat in raw materials, concentrates or compound feed. It also states the proportion of Omega 3 in relation to Omega 6.



*“**it3** is to fat and Omega 3 what PDI (Digestible Protein in the Intestine) is to proteins.”*

AN **it3** VALUE FOR EACH STAGE OF LACTATION AND MILK PRODUCTION.

	8,000 L		10,000 L		12,000 L	
Stage of lactation	Milk yield (L)	Related IT3	Milk yield (L)	Related IT3	Milk yield (L)	Related IT3
Dry period		0		0		0
Transition period		45		45		45
Early lactation	30	100	35	120	40	140
Middle of lactation	27	55	33	85	39	115
End of lactation	20	10	27.5	50	35	90
Total	25.7	50	31.8	85	38	115

Feed recommendations with EasyLin:

Stage of lactation	Dry	Close-up	Fresh	Top	Middle	End
it3	-	45	100	120-150	80-100	30-50
Crude protein	12-13	14	17	17-18	16	15
Crude fiber	25	20-22	17-18	16-18	17-18	18-20

Thanks to 20 years of experience Valorex can establish specific recommendations to guarantee the best effect of EasyLin. Omega 3 fatty acids need a minimum of soluble protein in the rumen as a fermentation starter, linseed is a protein consumer.

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GROUP OF COMPANIES

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in partnership with

Valorex
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ANIMAL FEED

AUSTRIA BULGARIA CROATIA CZECH REPUBLIC HUNGARY POLAND ROMANIA SERBIA SLOVAKIA SLOVENIA