Lamb Presenter

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Phileo by Lesaffre

About Phileo by Lesaffre

Actisaf® and Safmannan® are produced by Phileo by Lesaffre, a part of the Lesaffre group, the world's largest manufacturer of yeast with over 165 years of experience as a family-run company.

Today, the Lesaffre group has 63 production sites across the globe and a commercial presence in 185 countries. The group employs over 10,000 people, 550 of which are dedicated to Research and Development.

Phileo by Lesaffre also has its own dedicated research and development farm in Toulouse.

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Helping lambs thrive with Actisaf® & Safmannan®

Actisaf® and Safmannan® can be fed to finishing and store lambs to optimise rumen development, as well as support health. As a result, lambs convert feed more efficiently, grow faster, can be finished earlier and maintain health during challenging periods.

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Focus on rumen development: Actisaf

Modifies the rumen's microbial population, stabilises rumen pH and improves feed efficiency and fibre digestion

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Focus on supporting health: Safmannan

Supports immune status and helps develop gut health and maintain it under challenging conditions

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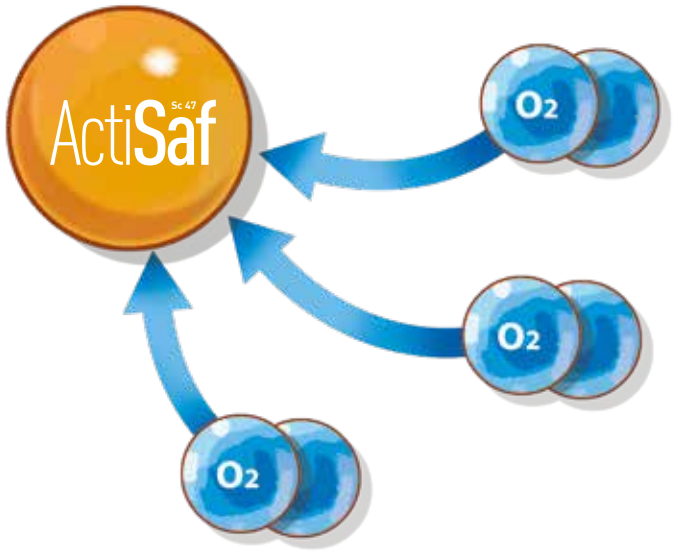
The role of Actisaf® live yeast in lamb diets

Actisaf® has several roles to play in lambs:

- Uses up oxygen in the rumen
- Stimulates development of gut microflora
- Promotes rumen development
- Helps lambs digest solid feed earlier
- Stimulates beneficial microbes, increasing microbial protein production and converts lactic acid to propionate (the key glucose pre-cursor)
- Stabilises rumen pH



5g of Actisaf® has been proven to have a superior buffering capacity to 150g of bicarbonate.

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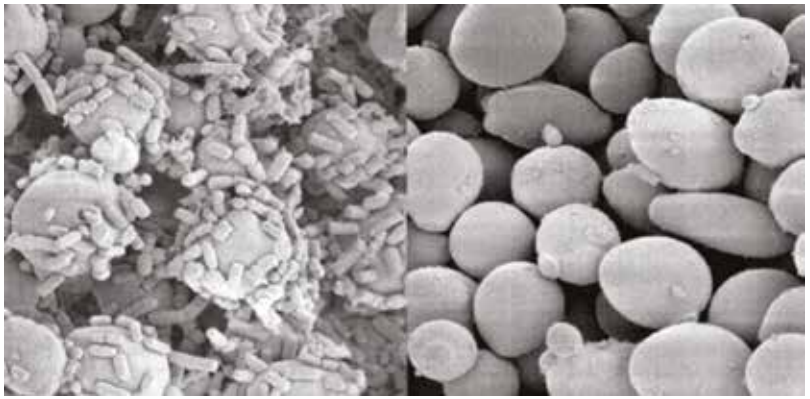
What is Safmannan®?

Safmannan® is a premium yeast fraction that is high in two key molecules:

- **Mannanoproteins:** bind to certain pathogens, like *E. coli* and *Salmonella*, carrying them out of the lamb before they can do serious harm
- **Beta-glucans:** support natural immune function

By reducing pathogen pressure and improving villi development, Safmannan® leads to:

- Enhanced absorption of nutrients
- Supported immune status
- Good quality colostrum in ewes



Safmannan binds pathogens, reducing risk of disease and improving gut integrity

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Getting the right start: using Safmannan® in the ewe diet

Feeding Safmannan® to ewes pre-lambing results in better quality colostrum, giving lambs a better start in life and optimising growth post-weaning.

- 200 May-lambing ewes were selected
- Treated and control feed blocks were fed for 4 weeks pre-lambing
- After lambing, colostrum IgG level from the two groups were compared

Results

- Significant increase (+25%) in colostrum IgG with Safmannan® feeding ($p<0.05$)

	lgG Rep1	lgG Rep2	Mean
Treated	236.5	220.5	228.5
Control	176.6	189.2	182.9

To learn more about feeding Actisaf® and Safmannan® in ewe diets, visit www.yeastsolutions.co.uk/technical-info/sheep

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Managing lambs through to weaning

Feed efficiency is highest in the early stages of life and declines with age. As such, it is vital that lambs are fed a diet to maximise early life growth.

Creep feed gives the energy, DUP and starch needed to efficiently increase growth and rumen development. Other benefits include:

- Reduced energy demands on the ewe (especially for triplets, ewe lambs and ewes in poor condition)
- Increased number of lambs slaughtered pre-weaning
- Improved kill out % for lambs slaughtered before weaning

It is important to remember that lambs may not eat enough forage and are at risk of sub acute ruminal acidosis (SARA) and other diseases due to close contact.

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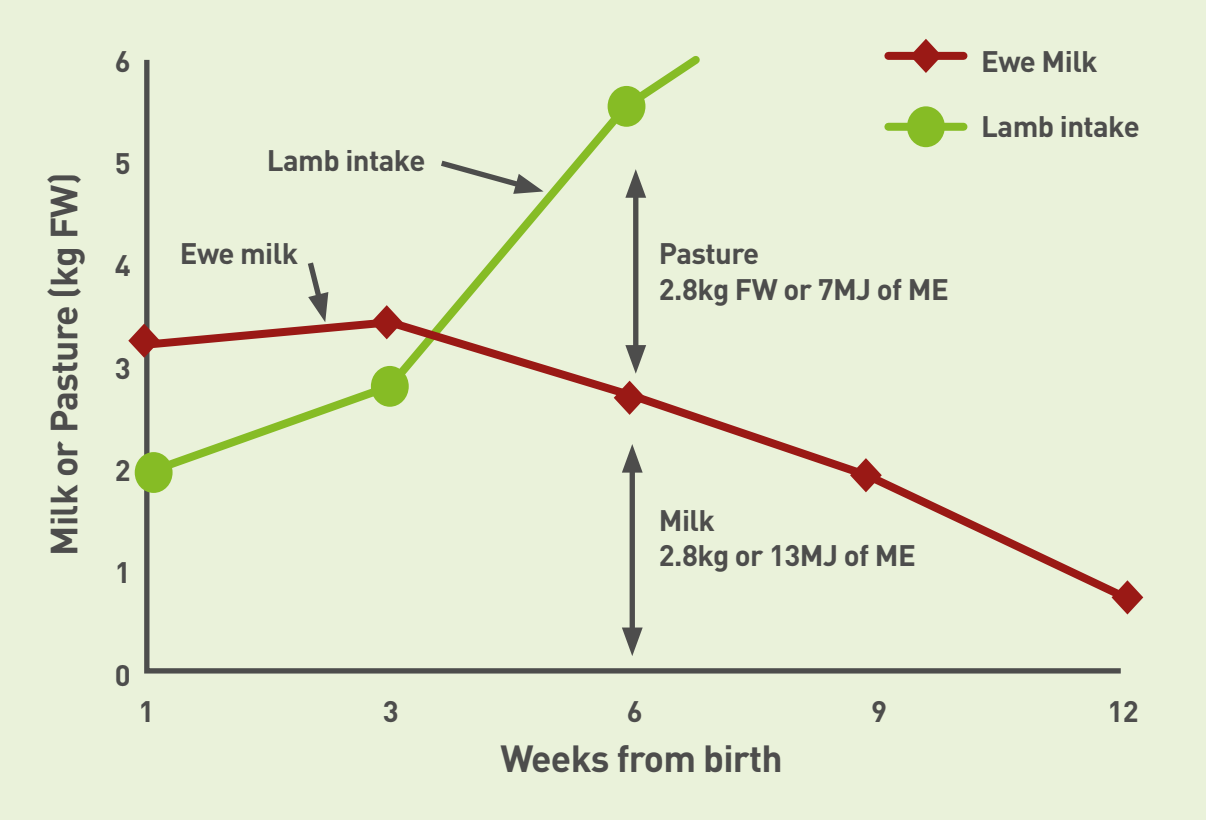
Limiting setbacks in performance post-weaning

As can be seen in the figure below, by 6 weeks old, lambs will be consuming 50% of their diet from grass or other hard feed.



Therefore, it is essential to ensure rumen development is optimised to avoid any setbacks post-weaning.

This requires very high quality grass and/or creep feed - maintain swards between 4-8cm to maximise quality.

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Digestion in the rumen

The rumen is a large fermentation chamber packed full of microbes, which:

- Digest feed to make energy and protein available to the animal
- Require a low oxygen environment, and pH between 6.0-7.0 to optimise feed digestion
- For optimal growth and digestion, the rumen microbes require a balanced source of effective fibre, digestible fibre, starch, sugars, proteins and trace elements

Bacteria
~300 species
10^{10} to 10^{11} cells/ml

Methanogenic Archaea
~6 species
10^{6} to 10^{8} cells/ml

Ciliate Protozoa
~40 species
$<10^{5}$ cells/ml

Anaerobic Fungi
~30 species
$<10^{5}$ cells/ml

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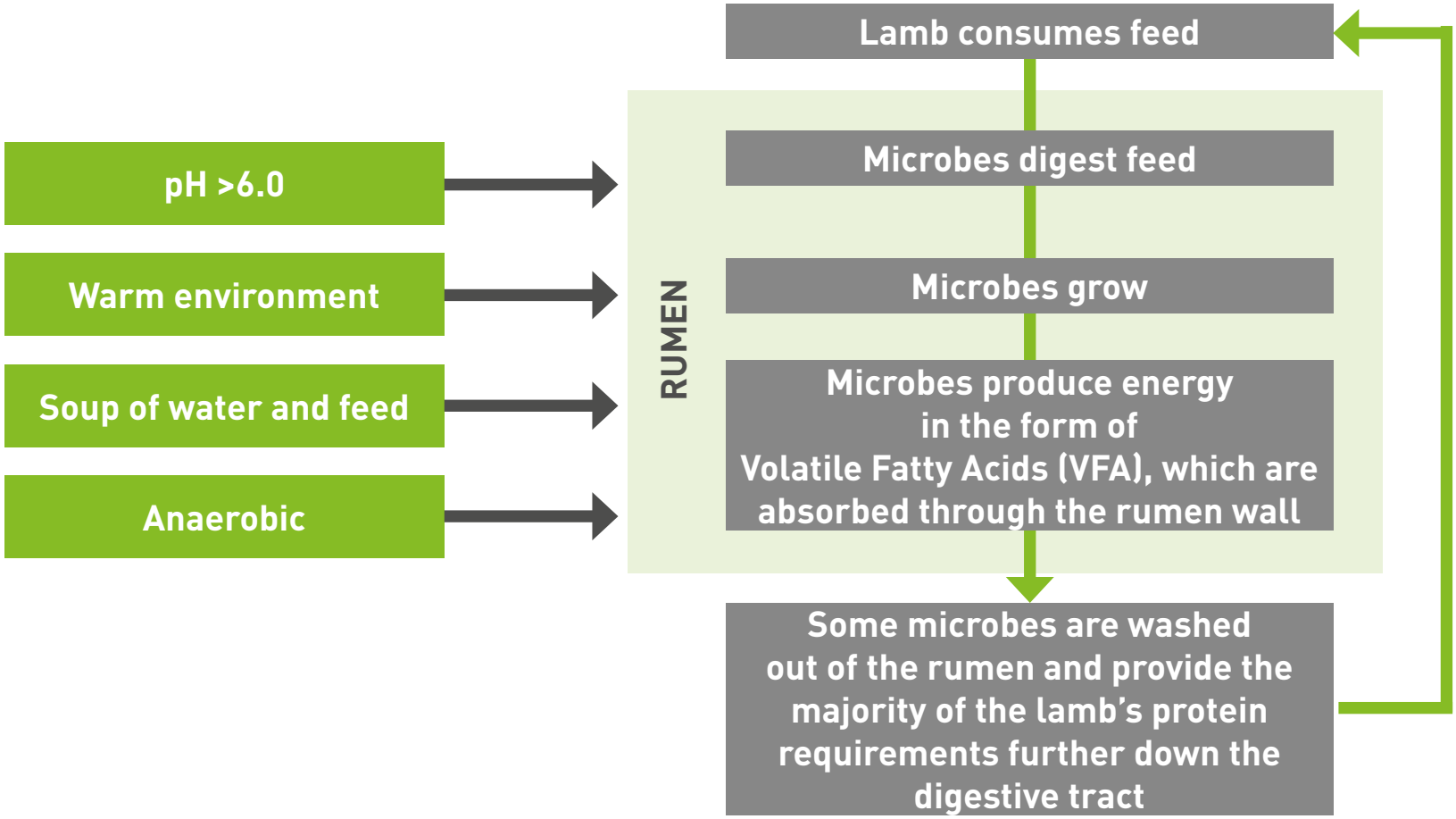
Rumen function

In lambs, we aim to promote rumen development early in life in order to ensure optimal performance later in life...



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Stress on weaned lambs

Stress is known to suppress the immune system in lambs, and weaning is arguably the most stressful period in the lamb's life. Additional stressors from a multitude of sources can also compound this problem further.

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Feeding and management of lambs post-weaning

There are several options available when fattening lambs post-weaning, depending on farm resources and time of year (e.g. grass finishing, grass plus concentrates, brassicas / root crops or ad lib concentrate feeding).

Independent of system there are a number of universal factors to consider:

- Tailor the diet to lamb type. Lighter lambs require further frame growth and therefore protein. Heavier lambs need more energy and should be fed cereals or other high energy ingredients.
- Sort by liveweight and bring groups forward in batches to improve efficiency.
- Spread diet changes over 2-3 weeks to allow the microbes to adapt and reduce the risk of poor rumen function or acidosis.
- Formulate concentrates to complement the feed and forages available on farm.

Energy requirements of weaned lambs

38kg lamb, growing at 140g/day

Energy requirement for maintenance:
(38 kg ÷ 10) + 3 = 7 MJ/day

Energy requirement for growth:
(43 MJ ME X 0.14 kg DLWG) = 6 MJ

Total energy requirement:
13 MJ ME/day

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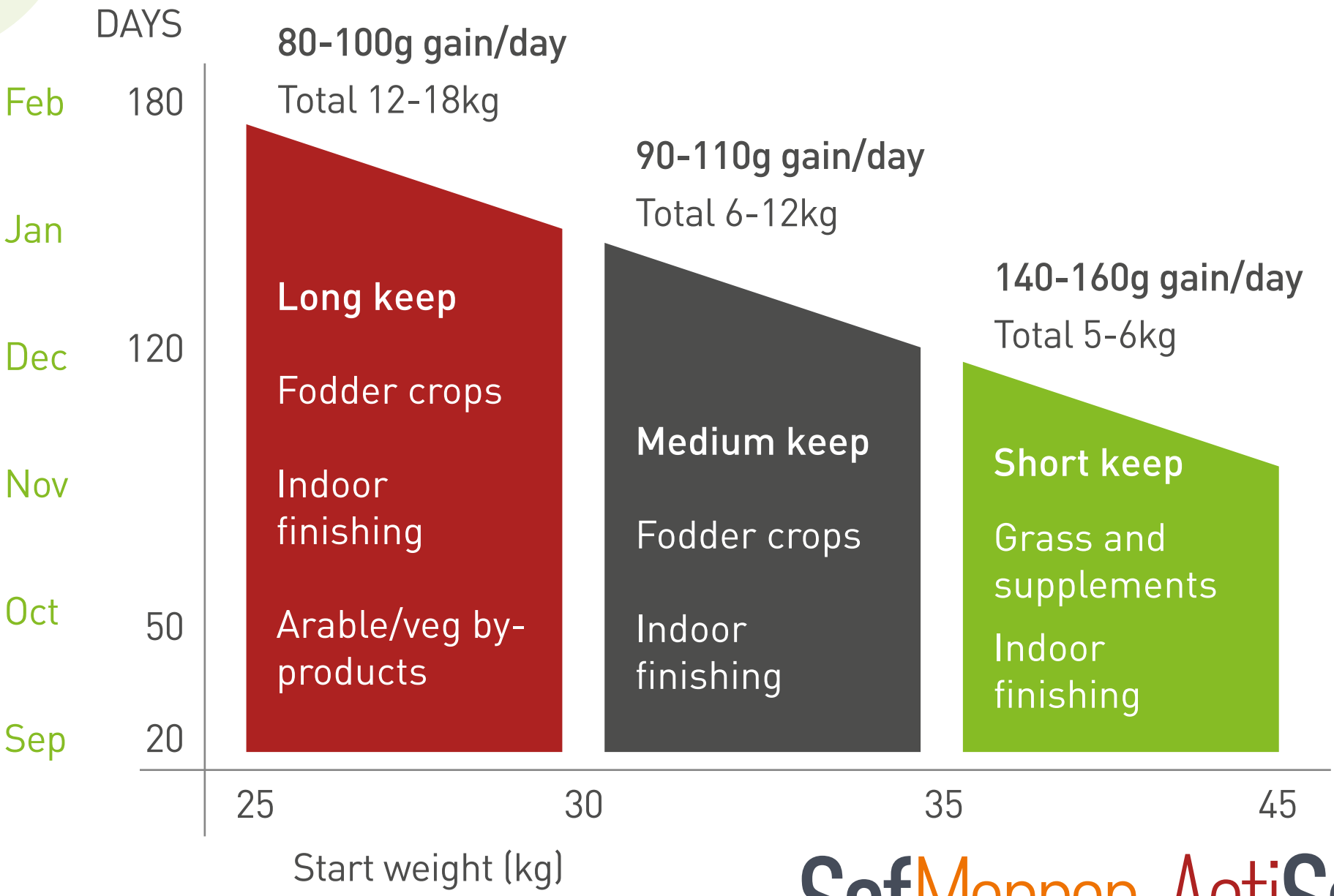
Store lamb finishing systems



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Lamb feeding systems

- Grazed grass – 8-10cm sward heights
- Grazing roots and forage brassicas can be low cost
- When grazing is limited:
    - Concentrates with high levels of starch and sugars must be introduced gradually over a number of days when lambs are showing no signs of digestive upset
    - Concentrates should be from a balanced source of cereals, digestible fibre and protein sources
    - Forage-based rations with grass silage, maize silage or cereal wholecrop can be introduced more safely
    - Actisaf® helps by improving fibre digestion, rumen pH and, ultimately, the utilisation of feed

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Sample diet specifications

Introductory concentrate mix for lighter finishing lambs

- 16% crude protein as fed
- <35% cereals (e.g. barley or oats to reduce incidence of acidosis)
- Quality protein sources (e.g. soya)
- Digestible fibre source (e.g. sugar beet)
- 5-10% molasses to hold it all together
- 2% high calcium/low magnesium minerals to avoid urinary calculi (crystals in urine)

Mix for heavier finishing lambs established on ad-lib concentrates

- 15% crude protein (as fed)
- Up to 60% cereals from a mix of sources (e.g. barley, oats, wheat, maize)
- 5-10% molasses
- 2% high calcium/low magnesium minerals to avoid urinary calculi (crystals in urine)

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Trial summary - Actisaf® in finishing lambs

France, 2005

- 1 Control, 1 Actisaf®
- 68 days, lambs 53 days old
- Concentrate 1.25kg/d and straw 370 g/d
- Actisaf® 0.5g/lamb/day

	Control	Actisaf®	Anova (P)
Initial number of lambs	20	20	NS
Mortality (heads)	0	0	NS
Initial live weight (kg)	15.5	15.7	NS
Final live weight at 68 days (kg)	39.2	41.5	P<0.05
ADG 0-48 days (g/j)	348	379	P<0.05
Carcass weight (kg)	18.6	19.8	P<0.01
Carcass yield	0.47	0.48	P<0.01

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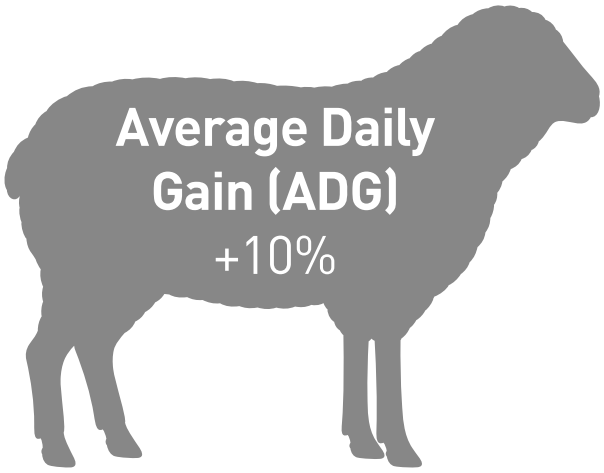
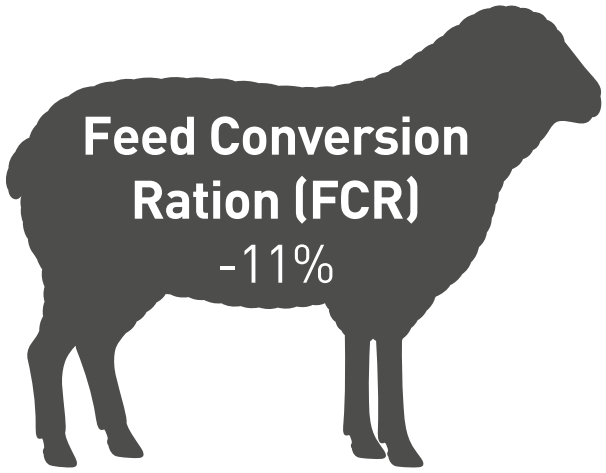
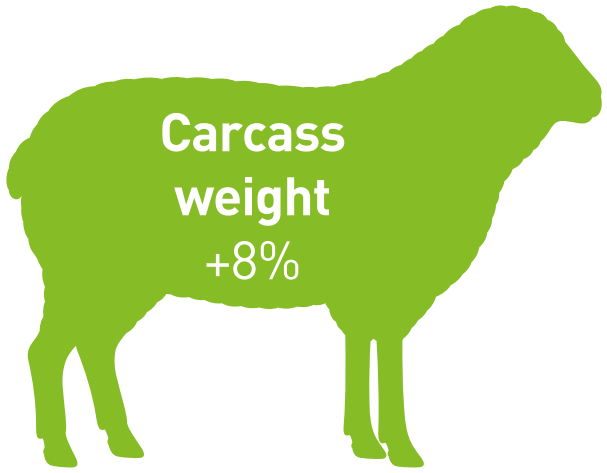
Actisaf® in finishing lambs - overall trial results







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Conclusions

- Maximise weight gain when the lamb is most efficient.
- Make changes to the diet slowly.
- Managing the lamb around weaning is key.
- Tailor the diet to the type of lamb and on-farm feeds.
- Feed Actisaf® live yeast for improved rumen development, rumen function, feed utilisation and daily live weight gain.
- Feed Safmannan® for a better start for lambs.

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