

# Content

## Introduction AGRIVANTAGE



# AgriVantage Ltd

- Set up in 2011
- Owner and Business Manager Warren Tanner
- 20 plus years in the agricultural industry
- Based in Hamilton

# AgriVantage Ltd

- AgriVantage Ltd nationally distributes;
  - SprayFo Blue and Red calf milk replacer
  - SprayFo Primo Lamb milk replacer
  - SprayFo Primo Goat milk replacer
  - Biopect Scour treatment
  - Stalosan F Disinfectant
  - Monotec 100 – MicroGranulation Monensin
  - Rumevite Magnesium Capsules

# Content

## Rearing Basics



# Goal of Rearing

## From calf

- healthy growth
- rumen development



## To cow

- high yield
- good developed
- roughage eater



**BUT HOW?**

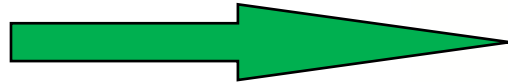


# Goal of Rearing

**From Calf**

Fast Growth

Rumen Development



**To Bull**

Well developed

Quality meat

Roughage Eater

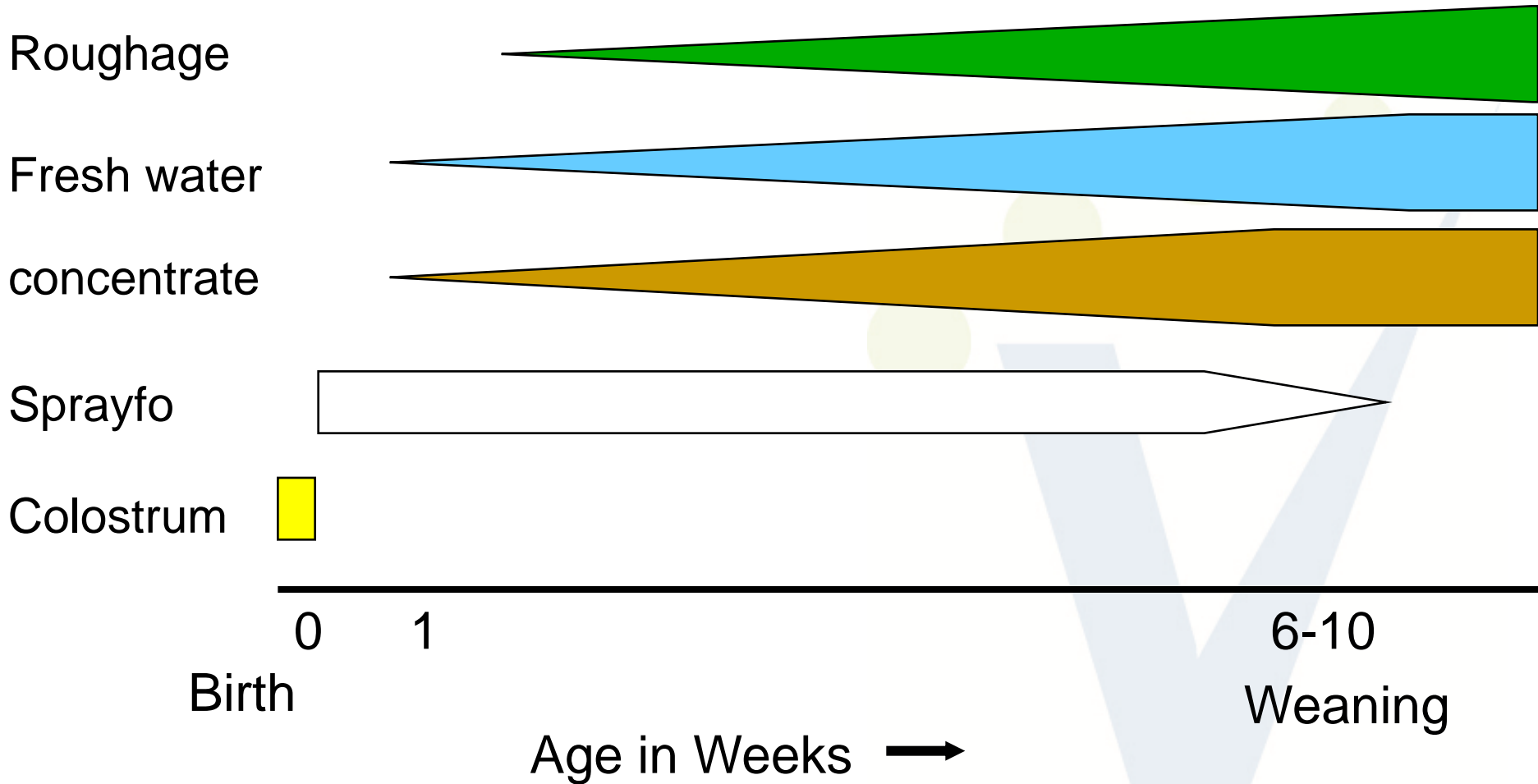


# Key Attention Points

- Birth
- Colostrum
- Feeding System
- Digestion
- Health

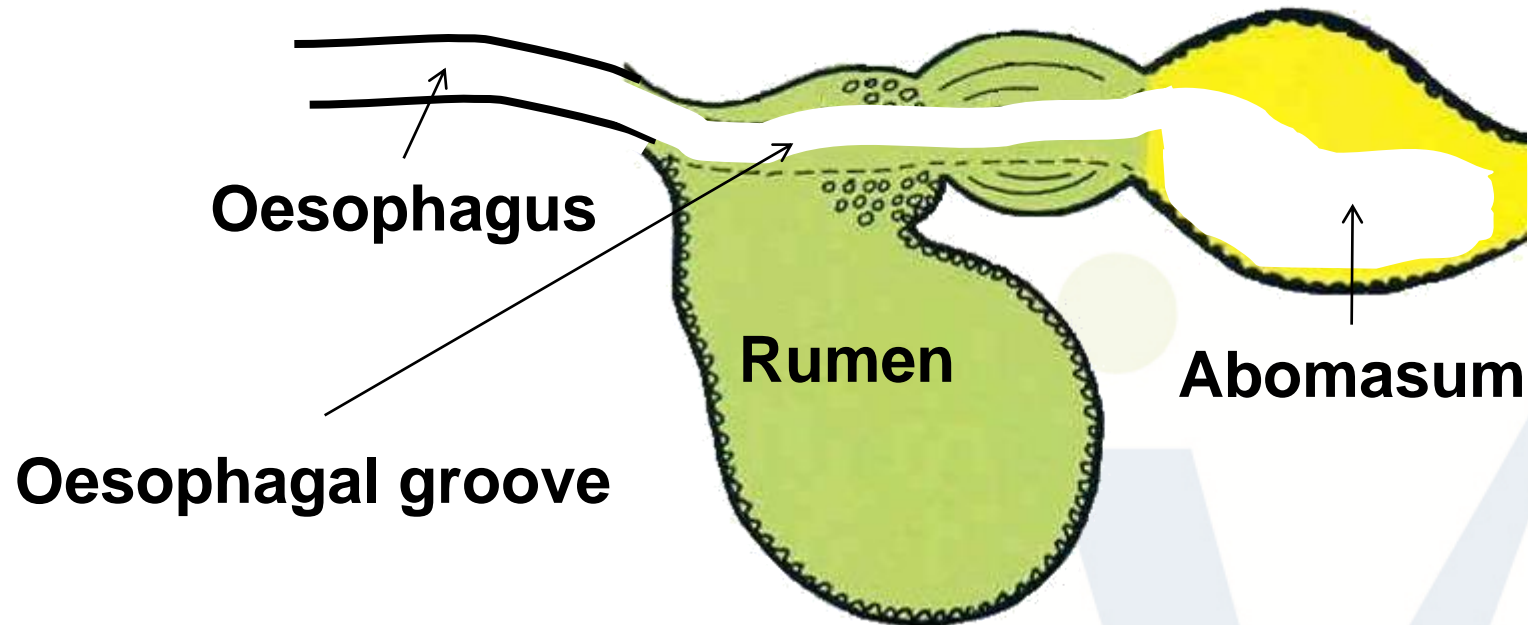


# Feeding System





# Feed Flow



Age (weeks)	Content in litres	
	rumen	Abomasum
0	0,5	1 – 3
6	4 – 6	~5
12	10 -15	~5
16	30	~5

# Rumen Development

Rumen at 6 weeks of age

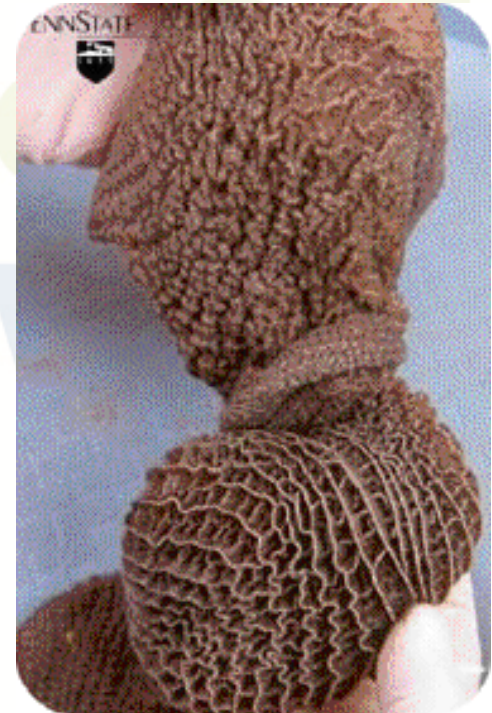
**Milk only**



**Milk + roughage**



**Milk + Concentrates**



# Content

Introduction  
**SLOTEN**



# Sloten BV

- European Market Leader of calf milk replacers
  - Market Leader, with 60% share in Dutch rearing market
  - Largest exporter of milk replacers for rearing
- Sole focus is young animal nutrition
  - No link to milk processor
  - Only quality ingredients
  - Contracted Research Farm
- Commercial technical support
- Subsideries in Germany, Poland, Brazil, Italy
- Other countries via Importers and distributors

# Sloten BV



# Sloten BV



**Milk replacer for: Calves**  
**Lambs**  
**Kids**  
**Foals**  
**Buffaloes**  
**Piglets**



**Dairy based feed ingredients**



**Milk replacer for veal calves**

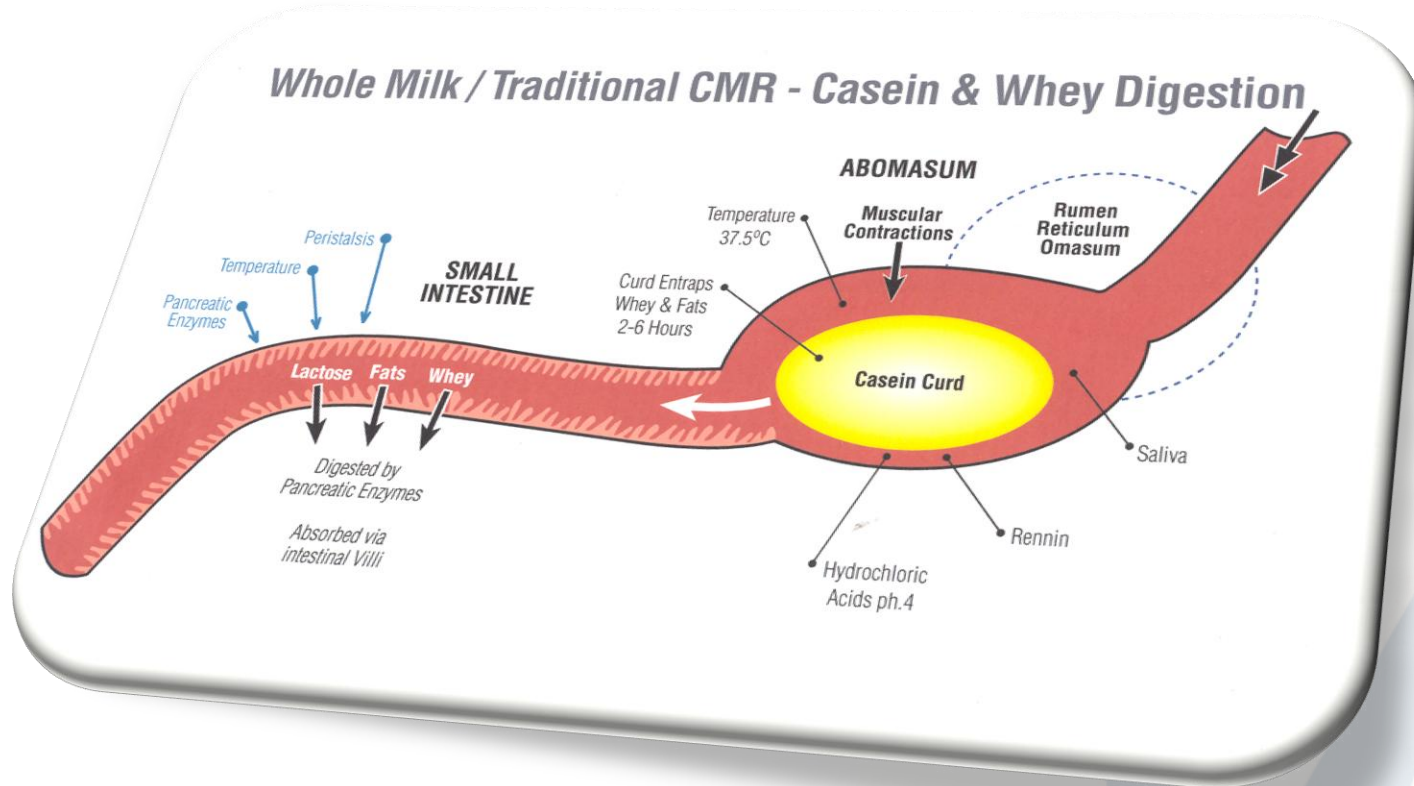


# Content

Whey v Casein



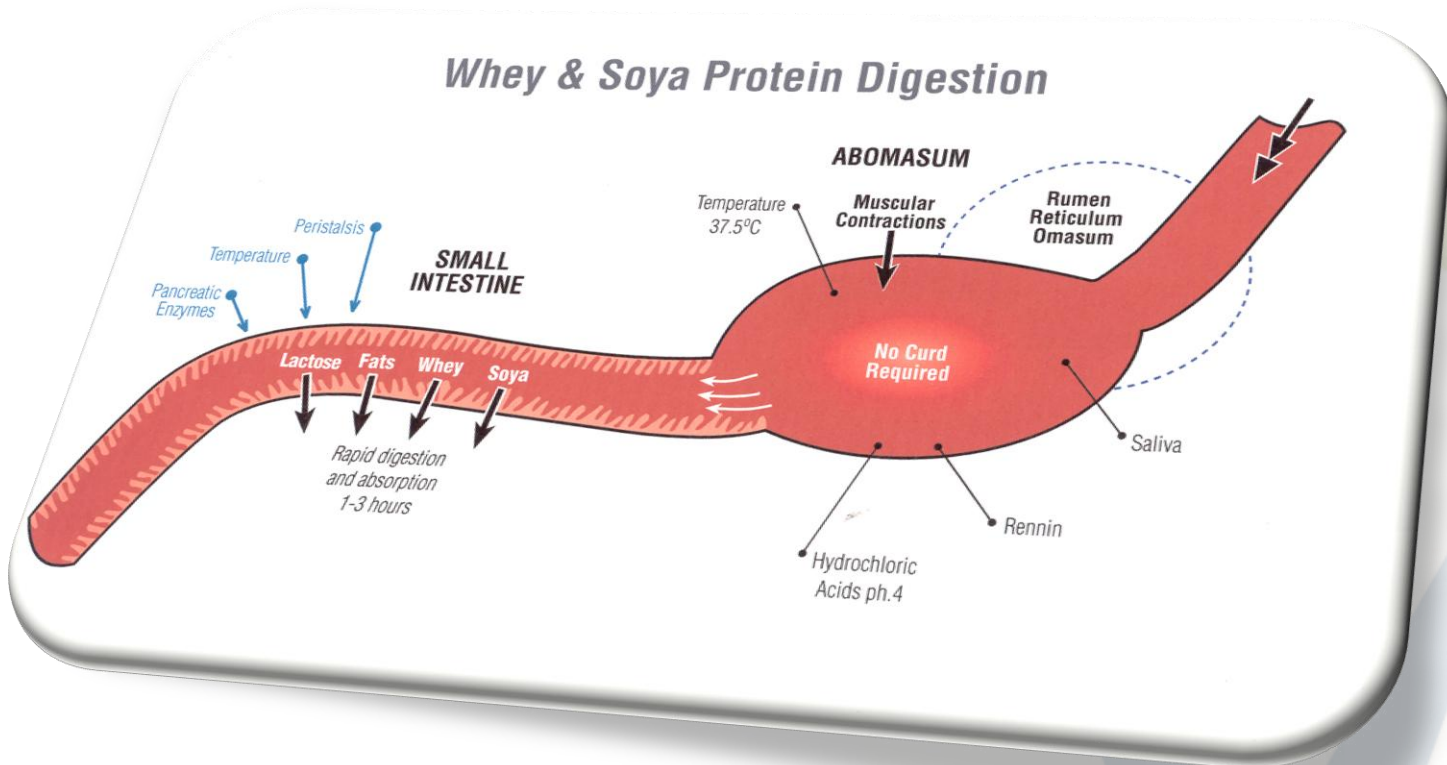
# Whole Milk CMR



Casein protein needs to curd within the abomasum for several hours before the milk passes into the small intestine for digestion.



# Whey CMR



Whey protein is able to pass more rapidly into the small intestine so is digested within hours. This rapid digestion encourages earlier feed intake into the rumen.

Whey & hydrolysed wheat proteins tend to reduce incidence of nutritional scours.

# Whey v Casein

## Casein

- Forms a curd in the abomasum
  - Needs approx 7-8% casein to form a good curd – total volume
- Takes 2-3 times longer to digest
- Animal fuller for longer
- Can restrict their concentrate intake and hence rumen development
- Majority of CMR sold in NZ is Casein – approx 75%
- Standard Brown Bag is non curding but many rearers and farmers think it casein

# Whey v Casein

## Whey

- Doesn't form a curd in the abomasum
- Digests 2-3 times faster
- Animals get hungrier quicker and look for feed i.e. Concentrates
- Aids in faster rumen development
- Care needs to be taken not to over feed
- Care needs to taken when feeding directly off colostrum.
  - Most Whey CMRs aren't recommended to be fed before 14-21 days
  - SprayFo Blue Premium CMR can be fed to young calves directly from colostrum

# High protein = no extra growth

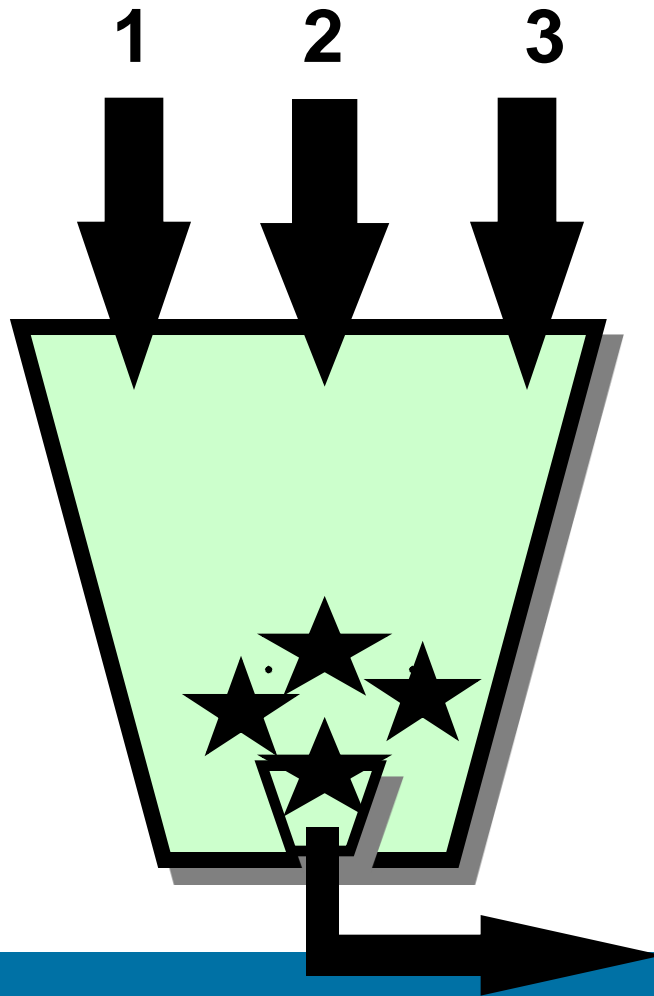
	Control group 22,5% protein	Trial 1 26% protein	Trial 2 22,5% protein amino acids corrected
Mortality (no. of calves)	0	1	2
Growth 0-15 weeks (kg)	102.2	97.2	101.9
Avg. daily growth 63d (g)	911	859	903
Avg. daily growth 12wk (g)	921	898	963

# Content

Production

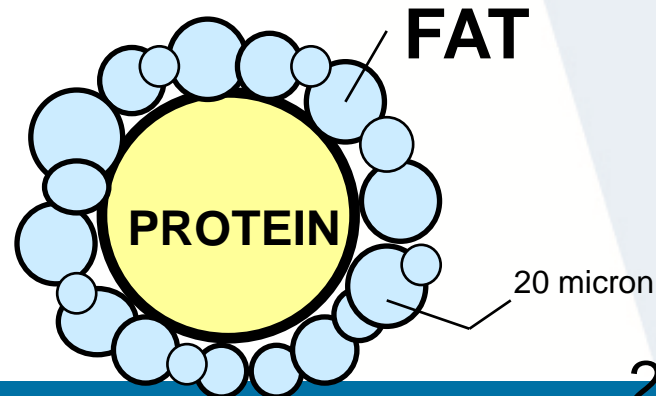


# Common Production Process



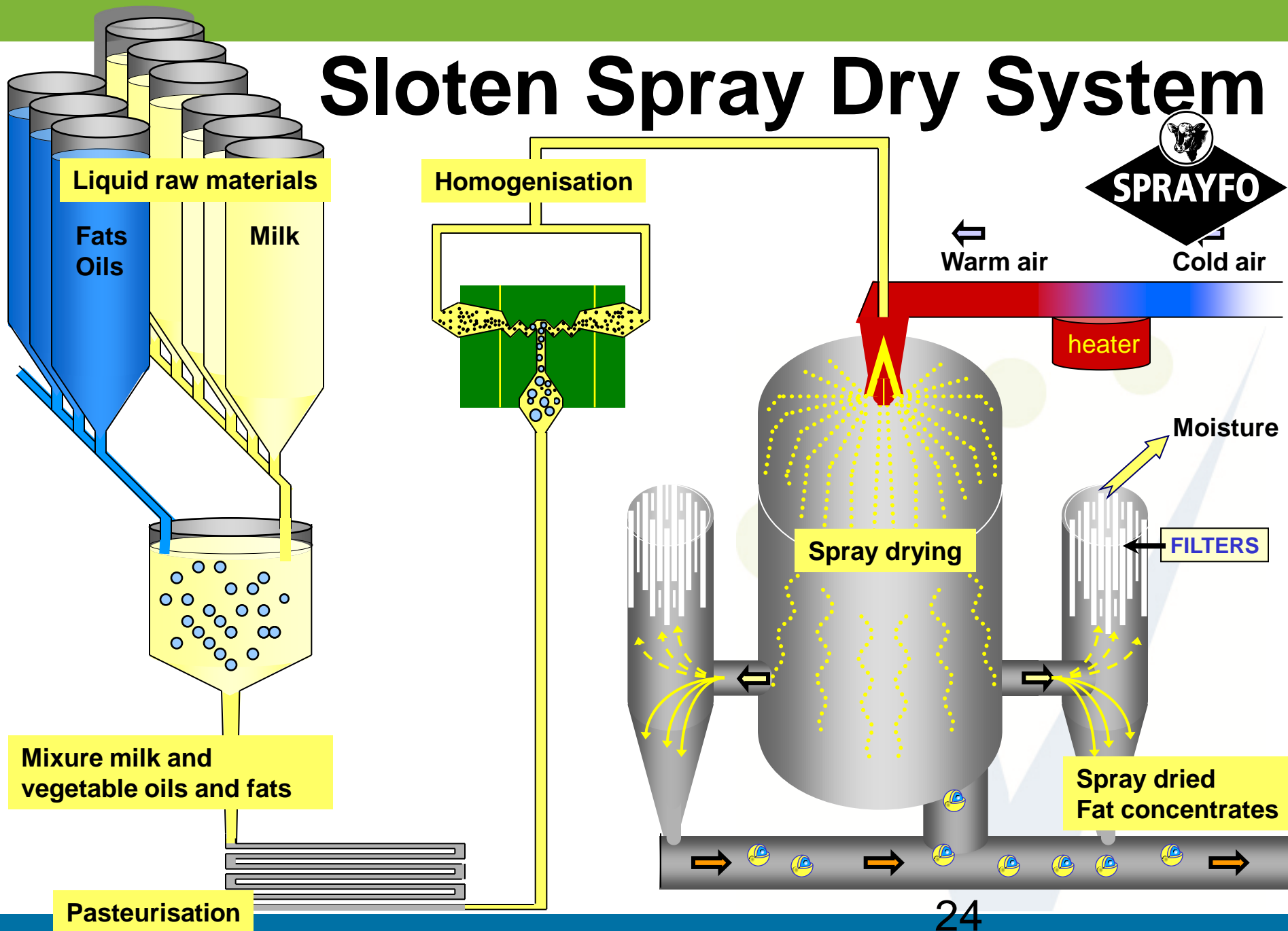
## DRY BLEND

- 1 : PROTEIN-SOURCES
- 2 : LACTOSE-SOURCES
- 3 : FAT-SOURCES





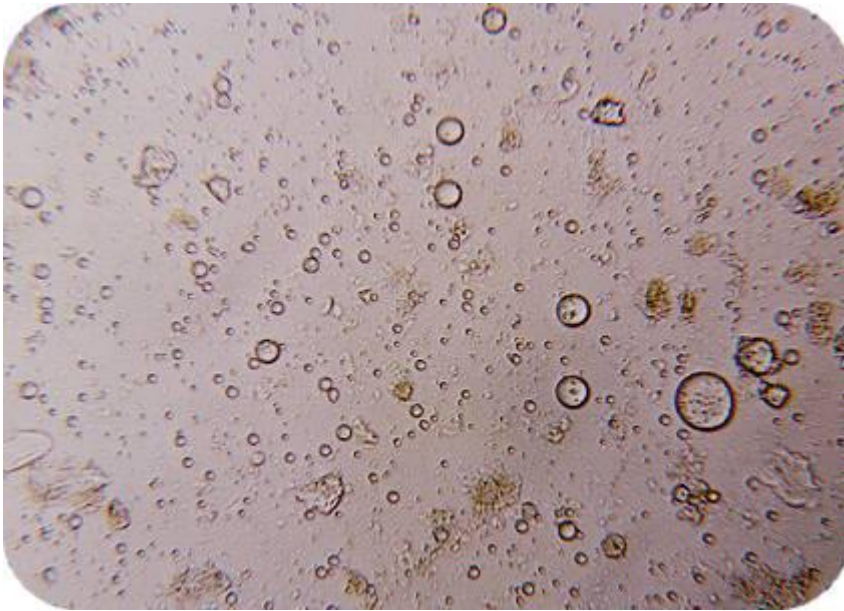
# Sloten Spray Dry System



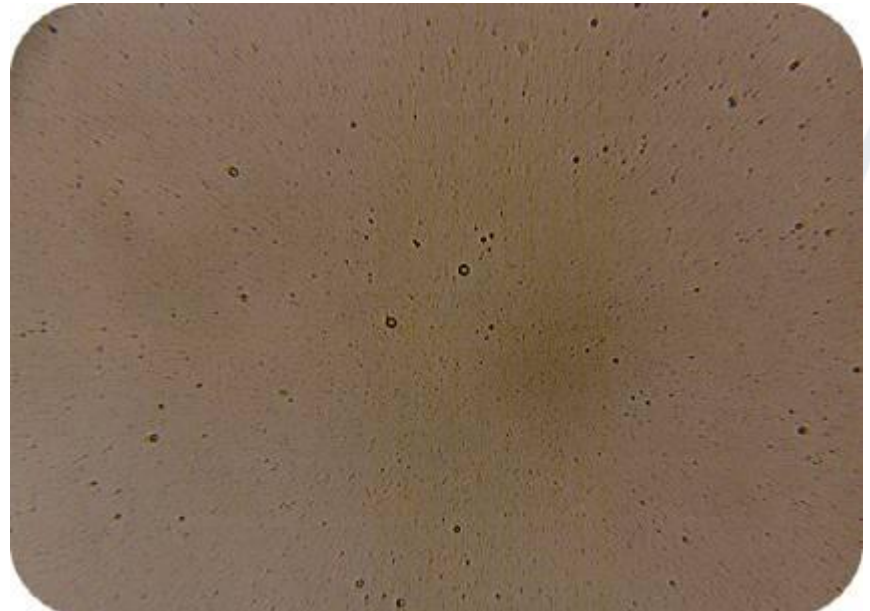


# Homogenisation Effect

**Blended Fat**

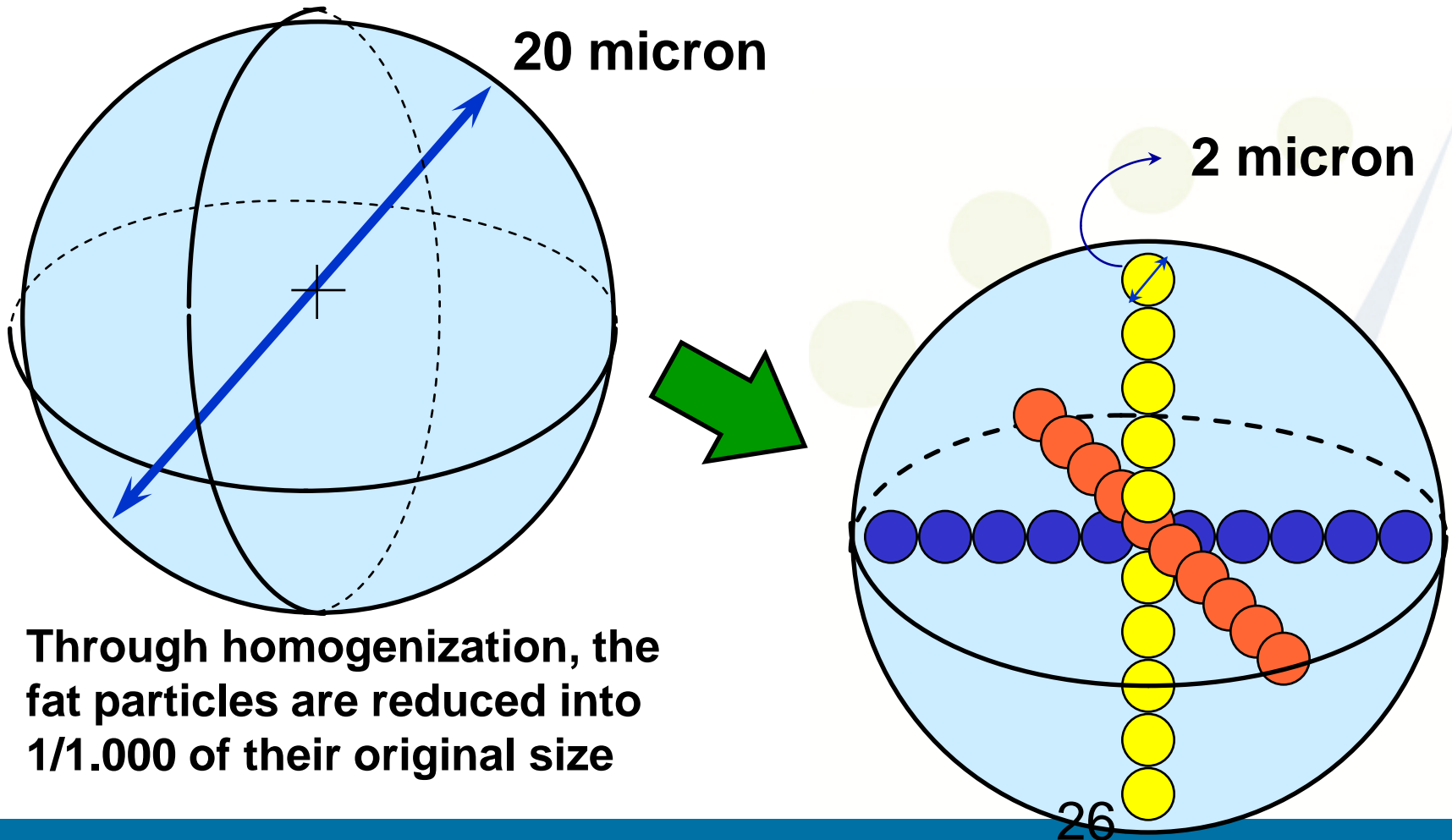


**Homogenized fat**

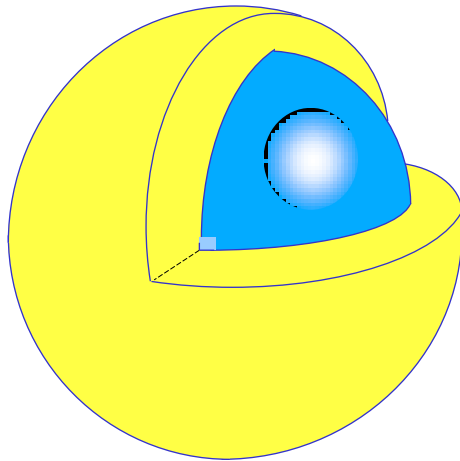


Through homogenization, fat particles are reduced into **1/1000** of their original size (homogenized fat  $\Rightarrow$  95% of the fat particles  $< 2 \mu\text{m}$ )

# Micro Encapsulated Fat



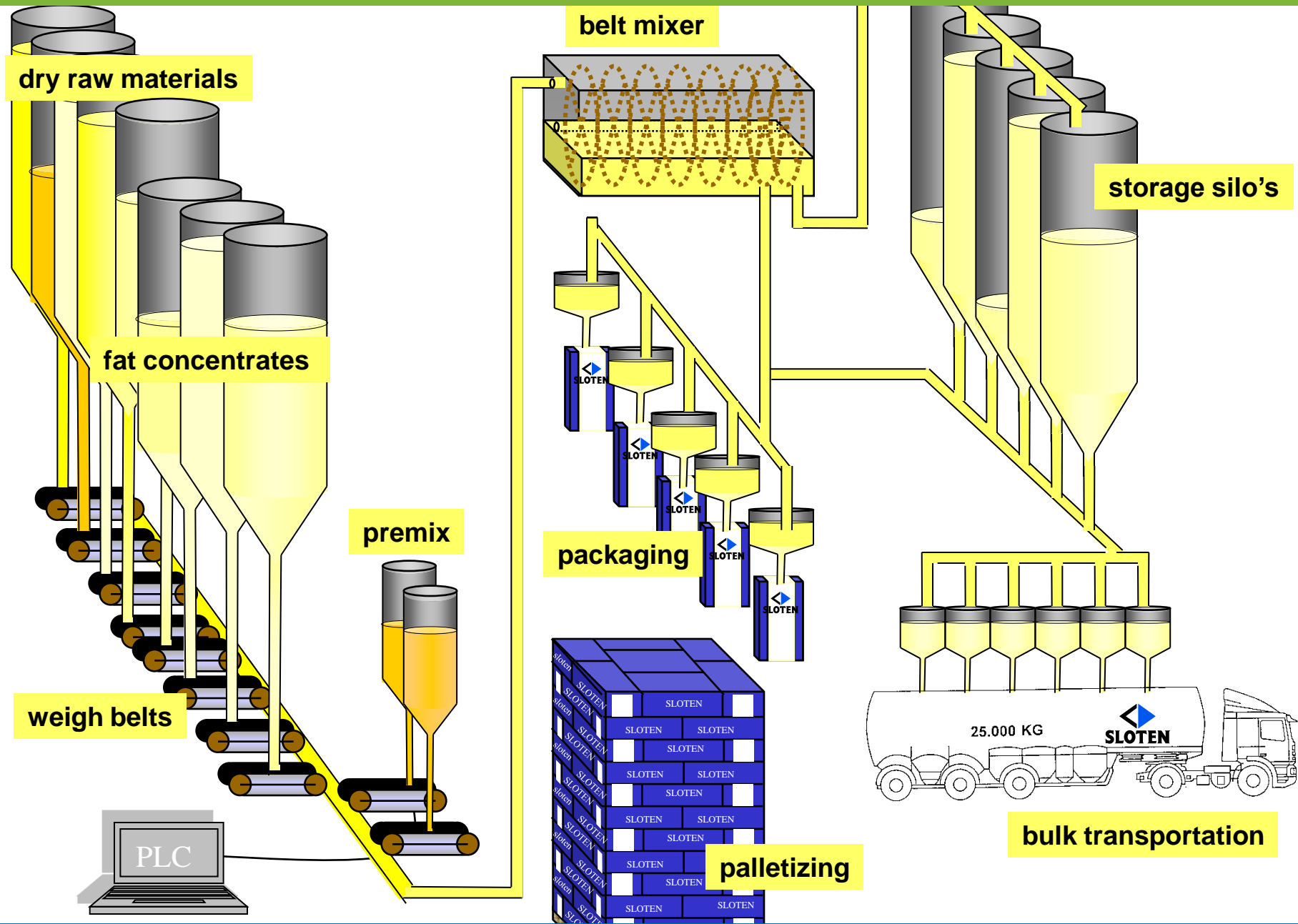
# Micro Encapsulated Fat



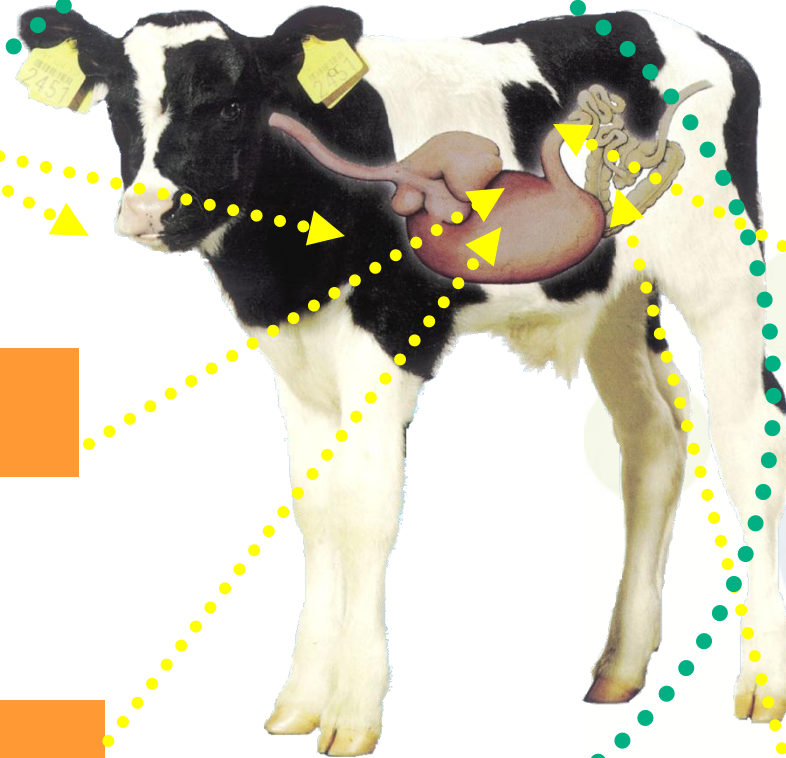
Tiny fat particles – less than 2 micron are surrounded by protein meaning the protein is readily available to the animal. The animal doesn't have to break down the fat first to utilise the protein.

✓ Sprayfo CMR is the only product currently available in NZ that is homogenised during the manufacturing process.





# Safety Package



## **SLOTEN Acid Mix**

For a healthy abomasum.

## **Micro Encapsulated Fat**

For a better growth with lesser risks.

## **Immuno Active<sup>+</sup>**

For a higher level of natural resistance.

## **Villi Vital + Probiotic**

For healthy small intestines.

## **Prebiotic**

For a more stable flora in the large intestines



# Content

**SPRAYFO\* Products**



# SprayFo Products

## SprayFo Blue Premium CMR

- ✓ Premium quality Calf Milk replacer
- ✓ Can be fed to calves from 4 days old
- ✓ Whey Protein – faster digestion
- ✓ Hydrolysed wheat protein (**no Soy**) – better digestibility
- ✓ Superior mixability – specially in cold water
- ✓ Superior suspension
- ✓ Can be used to mix with liquid whole milk
- ✓ Recommended worldwide for use in automatic feeding machines





# SprayFo Products

## SprayFo Red CMR

- ✓ Top quality Calf Milk replacer
- ✓ Can be fed to calves from 14 days old
- ✓ Whey Protein – faster digestion
- ✓ Hydrolysed wheat protein – better digestibility
- ✓ Soya Protein – lower cost
- ✓ Superior mixability – specially in cold water
- ✓ Superior suspension
- ✓ Can be used to mix with liquid whole milk
- ✓ Recommended worldwide for use in automatic feeding machines



# SprayFo Products

## SprayFo Primo Goat MR

- ✓ Premium whey based milk replacer for goat kids
- ✓ The only specifically formulated milk replacer for goats kids in New Zealand
- ✓ Can be fed to kids directly from colostrum
- ✓ Whey Protein – faster digestion
- ✓ Hydrolysed wheat protein (**no soy**) – better digestibility
- ✓ Superior mixability
- ✓ Superior suspension – won't drop out of solution
- ✓ Recommended by manufacturers of automatic feeding machines for use through their machines



# SprayFo Products

## SprayFo Primo Lamb MR

- ✓ Premium quality lamb milk replacer
- ✓ Can be fed to lambs directly from colostrum
- ✓ Whey Protein – faster digestion
- ✓ Hydrolysed wheat protein (**no Soy**) – better digestibility
- ✓ Superior mixability
- ✓ Superior suspension – won't drop out of solution
- ✓ Recommended by manufacturers of automatic feeding machines for use through their machines



# Content

Summary



# SprayFo Blue CMR-F&Bs

Feature	Benefit	Implication
Spray dried from liquid	Consistently tiny particles with both fat and protein	Solubility – suspends well even in cold water or milk
Premium quality ingredients only	Highly digestible milk replacer, in tiny particles	Digestibility – high % of Protein and fat is digested by the calf
SprayFo Safety Pack (micro-ingredients)	Probiotics, prebiotics, acids optimal vitamin levels	Reduced risk of scours – faster, more uniform growth rates
Whey protein	Whey digested via small intestine sooner (cf casein)	Earlier calf concentrate intakes – leads to earlier rumen development
Hydrolysed wheat protein – <u>no soya protein included</u>	Suitable for 4 day old calves as no soya protein included	Farmers can utilise two product system for calves of all ages
Sloten research trial farm with 600 calves	SprayFo ingredients and milk replacers fully tested	Most consistent and reliable milk replacers available in NZ
SprayFo may be used to fortify liquid milk	Blends well even in cold milk (up to 50:50)	Reduced intake (milk volume)... higher starter meal intakes

# SprayFo Red CMR-F&Bs

Feature	Benefit	Implication
Spray dried from liquid	Consistently tiny particles with both fat and protein	Solubility – suspends well even in cold water or milk
Premium quality ingredients only	Highly digestible milk replacer, in tiny particles	Digestibility – high % of Protein and fat is digested by the calf
SprayFo Safety Pack (micro-ingredients)	Probiotics, prebiotics, acids optimal vitamin levels	Reduced risk of scours – faster, more uniform growth rates
Whey protein	Whey digested via small intestine sooner (cf casein)	Earlier calf concentrate intakes – leads to earlier rumen development
Hydrolysed wheat protein and soya protein	Suitable for 14 day calves, as hydrolysed wheat included	Farmers can utilise two product system for calves of all ages
Sloten research trial farm with 600 calves	SprayFo ingredients and milk replacers fully tested	Most consistent and reliable milk replacers available in NZ
SprayFo may be used to fortify liquid milk	Blends well even in cold milk (up to 50:50)	Reduced intake (milk volume)... higher starter meal intakes

# Summary

## Protein:

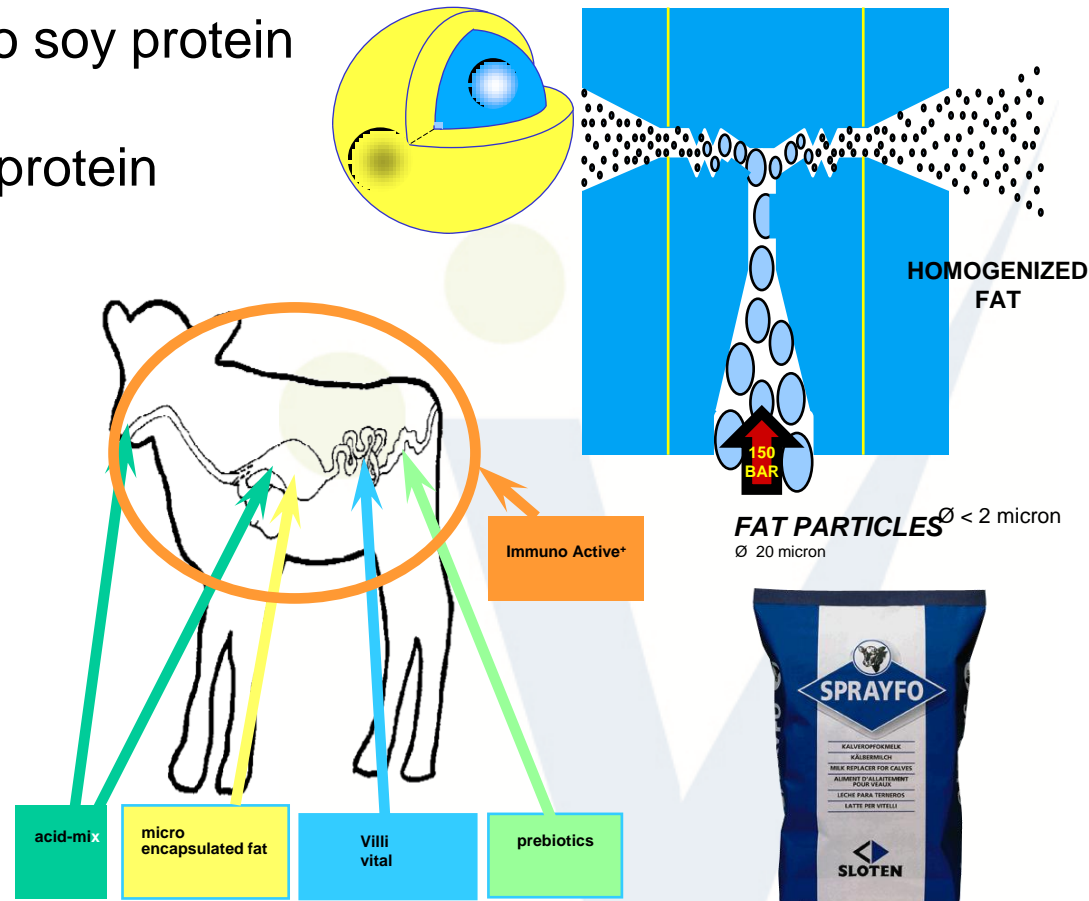
- ✓ Excellent protein sources, no soy protein
- ✓ Highly digestible
- ✓ Fat particles surrounded by protein

## Fat:

- ✓ Excellent fat sources
- ✓ Very small fat particles
- ✓ Easy to digest
- ✓ Limits diarrhoea risk

## Safety:

- ✓ Sprayfo Safety Package
  - Sloten Acid-Mix
  - Micro encapsulated fat
  - Villi Vital
  - Prebiotics



# Summary

- ◀ Easy to dissolve
- ◀ Stable in solution
- ◀ Clean equipment
- ◀ Palatable
- ◀ Safe calf rearing
- ◀ Optimal rumen development
- ◀ High growth

