FEED OPTIMISER[™] PELLETS FOR CATTLE

Vitamins, Minerals (Organic Trace, Macro & Electrolyte), Omega 3 and 6 Fatty Acids, Flaveco™ and Built-in Buffers



LA

The science of cattle feed, made easy, so that you can make YOUR own!

®

Feeding Made Simple

Simple THE FOUR STEP PLAN...

ROUGHAGE, such as chaff, hay and pasture

> 2. An ENERGY source such as grain or a non-grain alternative

- High quality PROTEIN for topline and coat condition

2 LIVAMOL

LIVAMOL FEED OPTIMISER Pellets

Scientifically formulated for Australian conditions and fortified with essential vitamins, minerals (including organic trace, macro & electrolyte), omega 3 and 6 fatty acids, Flaveco and built in buffers.

4. ESSENTIAL NUTRIENTS for health and performance

Introducing

FEED OPTIMISER[™] PELLETS FOR CATTLE

GROWTH, REPRODUCTION and LACTATION

PROTEIN & ENERGY

High quality protein and energy for growth and performance

ELECTROLYTES

®

for nerve and muscle function.

TRIMETHYLGLYCINE

an amino acid that works in 3 ways

PREMIUM NUTRITION FOR OPTIMAL HEALTH AND PERFORMANCE

GROWTH, REPRODUCTION and LACTATION

MACRO MINERALS

specifically balanced for bone growth, development and strength.

TRACE MINERALS

concentrated levels including chelates for bone, cartilage and hoof formation and metabolic functions

VITAMINS

fat soluble for normal bodily functions including bones, growth, muscle and reproductive function

Fat Soluble Vitamins

"A, D and E"

Vitamin A is important for maintaining normal vision, skin and mucous membranes, bones, muscle, growth processes and reproduction.

Opportunity for deficiency: Dry pasture, hay grown during drought, hay stored for long periods of time, heavily processed feeds.

Vitamin D is important for the absorption of calcium & phosphorous, normal growth, health of bones and teeth.

Signs of deficiency: rickets in calves, swollen and stiff joints, anorexia, irritability and convulsions. In older animals the signs are weak or brittle bones or posterior paralysis.

Vitamin E is an essential vitamin for optimum function of reproductive, muscular, circulatory, nervous and immune systems while acting as an antioxidant to protect and facilitate the uptake & storage of Vitamin A (Perry et al 1968), is important in the uptake of unsaturated fats and works hand in hand with selenium (see trace minerals).

Signs of deficiency: white muscle disease in calves, weak leg muscles, crossover walking, impaired sucking caused by weak tongue muscles.

COBALT, IODINE, COPPER and IRON

Cobalt is included because ruminal micro-organisms (like bacteria and protozoa) use it to convert it to vitamin B12 as well as the formation of red blood cells, haemoglobin and normal cell function.

Low cobalt can result in poor appetite, failure to grow or low growth rates, unthriftiness, rapid weight loss and pale mucous membranes due to anaemia (pale gums in the mouth).

lodine is essential for normal production of the thyroid hormones which regulate energy production in the body including hair growth.

Low iodine can result in hairless calves, weak or dead calves, poor reproduction including irregular cycling, low conception rates, retained placenta, low libido and decreased semen quality.

Copper is essential for enzyme production, important in iron metabolism, bone development and maintenance of elastic connective tissue.

Signs of copper deficiency include anaemia, reduced growth, changes in pigment, growth and appearance of hair, cardiac failure, fragile bones, diarrhoea and low reproduction.

Iron is essential in young animals to support growth and to prevent anaemia and in all animals as a component of haemoglobin in red blood cells.

Signs of deficiency include anaemia (pale gums in the mouth), listlessness, reduced feed intake and weight gain.

Trace Minerals

Trace Minerals

MANGANESE, ZINC and SELENIUM

Manganese has a role in several enzyme functions, blood clotting and the development of bone, cartilage and connective tissue.

Signs of deficiency in young animals includes skeletal abnormalities like stiffness, twisted legs, enlarged joints and reduced bone strength (Hurley & Keen 1987). In older animals it causes low reproduction performance which includes low or irregular cycling, low conception rates, abortion, still births and low birth rates.

Zinc is important in several enzymes systems including normal bone, cartilage development, skin integrity, mucous membranes, hair, hooves, wound healing, immunity, protein and carbohydrate metabolism.

Signs of deficiency include low growth, poor feed intake, listlessness, excessive salivation, reduced testicular growth, sore or swollen feet, poor wound healing and low immunity.

Selenium is very important for a number of reasons including prevention of white muscle disease while preventing cell oxidation as well as interacting with vitamin E, as an anti-oxidant.

Signs of deficiency include degeneration of skeletal and cardiac muscle, poor growth and development, weight loss, diarrhoea and poor immunity. Also includes some lameness and or foot malformations.

CALCIUM, PHOSPHOROUS, POTASSIUM, SODIUM and CHLORIDE

Macro Minerals

Calcium is the most abundant mineral in the body:

98% - structural components like teeth and bones

2%- distributed in extracellular fluids and soft tissues involving important functions like blood clotting, membrane permeability, muscle contraction, transmission of nerve functions, cardiac regulation, secretion of certain hormones and various hormone activities.

Calcium deficiency includes retarded growth and development, subnormal bone growth which can lead to rickets (deficiency of calcium, phosphorous or vitamin D. Signs include swollen joints, tender joints, enlargement of end bones, arched back and stiffness in the legs.

Phosphorous is the 2nd most abundant mineral and about 80% of the body's phosphorous is found in teeth, bones, muscle and soft tissue. Phosphorous has a role in various functions including cell growth, DNA and RNA differentiation, energy utilisations. Calcium and phosphorous work in tandem and both are important for bone mineral content and strength. Phosphorous deficiency has been described as the most mineral deficiency throughout the world (McDowell 1992).

Signs of deficiency include reduced growth and feed efficiency, poor appetite, poor reproduction, reduced milk production and weak, fragile bones(Underwood 1982; Sharp et all 1988)

Potassium is the 3rd most abundant mineral and has a role in feed intake, weight gain, normal digestion and utilization of dietary nutrients.

It is important for acid-base balance, water balance, muscle contractions etc and as an electrolyte along with sodium and chloride.

Signs of deficiency include reduced feed intake, pica (a medical disorder where animals consume non-nutritional items like metal, clay, soil etc) rough hair coat and muscular weakness.

Sodium and **Chloride** maintain osmotic pressure, control water balance and acid base regulation. Sodium has a role in muscle function, nerve impulses, glucose and amino acid transportation Chloride is necessary for the formation of stomach acid in the gastric juices. While both are important for normal electrolyte balance.

Signs of deficiency include pica (a medical disorder where animals consume non-nutritional items like metal, clay, soil etc), reduced feed intake, growth and milk production (Underwood 1981)

Macro Minerals

Delivering

more

MAGNESIUM, SULPHUR, TRIMETHYLGLYCINE, FATTY ACIDS and BUFFERS

Magnesium is essential for all biosynthetic processes and the maintenance of electrical potentials via the nerves and muscles. Of the total percentage of magnesium in the body:

65-75% is in the bone, 15% in muscle, 15% in other soft tissue and 1% in extracellar fluid.

Signs of deficiency include excitability, nervousness, reduced feed intake and muscular twitching around the face and ears.

Sulphur is a component of various amino acids, the B group vitamins – thiamine B1 and biotin and a number of other organic compounds and are important for rumen micro-organism function and cellular metabolism.

Low sulphur levels can effect microbial digestion, protein synthesis and are necessary for ruminal bacteria and protozoa. Signs of deficiency include anorexia, weight loss, weakness, dullness, emaciation and excessive salivation.

DELIVERING MORE

Trimethylglycine - an amino acid, works in 3 ways

- 1 maintains fluid/water balance within the cell and the animal
- 2 stabilises protein structure under denaturing conditions
- **3** acts a methyl donor to assist in the metabolism of fat and other processes within the animal.

Omega 3 & 6 Fatty acids – Selected Omega 3 and 6 fatty acids have been included in this formulation to improve skin and coat appearance. Each oil or fat has a blend of different fatty acids and the correct ratio is essential for consistent results.

Built in buffers – Livamol Feed Optimiser for Cattle has a builtin buffering system which allows for up to 6kgs of grain to be fed on a daily basis. It is important when feeding grain to gradually increase grain over several days (5-7 days).

Please see example below for an adult animal with free access to ad lib hay or pasture:

- **Day 1:** 2kg rolled/steamed rolled barley <u>or</u> rolled/crushed oats.
- **Day 3:** 3kg rolled/steamed rolled barley <u>or</u> rolled/crushed oats.
- **Day 5:** 4kg rolled/steamed rolled barley <u>or</u> rolled/crushed oats.
- **Day 7:** 5kg rolled/steamed rolled barley <u>or</u> rolled/crushed oats.

THE BENEFITS OF INTRODUCING FLAVECO™ TO YOUR BEEF OR DAIRY HERD.

- Flaveco is a proven performance product, approved for use with all calves and cattle.
- Flaveco provides an increased rate of weight gain (ADG) and improved feed conversion efficiency (FCR)
- Flaveco improves digestion of high fibre diets.
- With dairy cattle, increased milk yields, higher protein content and increased butter fat levels can all be anticipated ^(1,2,3,4,5) along with lower somatic cell counts ⁽⁶⁾ and higher cow fertility ⁽⁷⁾.

Flaveco is a cost effective tool to improve nutrient supply and profitability by positively influencing rumen fermentation patterns in ways the other performance products can't.

SOME OTHER BENEFITS FLAVECO PROVIDES ARE:

SIGNIFICANT SAFETY PROFILE:

The active in Flaveco is Flavophospholipol (also known as Bambermycin), which has one of the widest safety margins of any performance product. Cattle have been tested at up to 6 times the highest approved use level for periods of 6 months with no observable adverse effects ⁽⁸⁾.

Flaveco is not absorbed from the digestive system. Even when fed at 8 times the highest approved dose (for 66 days) no residues were found in tissue ⁽⁹⁾.

Approved for use in cattle, pigs and poultry, Flaveco remains safe even if feed containing Flaveco is accidentally consumed by other species.

Environmentally safe, Flaveco is degraded in soil and water by natural organisms and is not absorbed by plants grown in soil containing the manure of Flaveco fed animals ⁽¹⁰⁾.

Flaveco is safe for both farm workers and consumers. While Flaveco has been tested safely at higher levels, recommended dose rates should not be exceeded.

NIL WITHHOLDING PERIOD:

Because Flaveco has no record of residues in either milk or meat, Flaveco may be fed to stock right up until time of slaughter and dosing can be beneficially maintained throughout lactation.

COMPATIBILITY WITH OTHER ADDITIVES:

Flaveco exhibits no cross-resistance to therapeutic antibiotics like penicillin and tetracyclines and is compatible with feedstuffs, vitamins, minerals, coccidiostats, antibiotics, sulfonamides or probiotics such as Pro(N8)ure[®].

HIGH STABILITY:

Flaveco is extremely stable in premix formulae, in complete feeds and even after the rigours of pelleting. Trials indicate that Flaveco remains stable in feeds for a period of more than two years.

PALATABILITY:

Incorporating Flaveco into premixes, and complete feeds has no effect on palatability, animals do not 'back off' on feed uptake when it is introduced and feed uptake can be enhanced due to better digestion.

POSITIVE INFLUENCE ON ANTIBIOTIC RESISTANCE:

A unique characteristic of Flaveco is that it has been shown to restore the antibioticsensitivity of some resistant strains of bacteria such as *Salmonella, Shigella* and *E Coli* ^(11, 12, 13) and to lower the shedding of antibiotic-resistant bacteria ⁽¹⁴⁾.

the Flaveco Story

BENEFICIAL EFFECT ON REPRODUCTION WHEN USING FLAVECO:

By improving protein metabolism, FLAVECO can directly influence reproductive activity. It lowers the nitrogen level in the blood, helping to reduce the level of blood urea nitrogen (BUN). Excess BUN reduces conception rates ⁽¹⁵⁾, since it creates conditions in which the embryo cannot survive.

The hormones such as oestrogen and progesterone are required for normal cycling activity and maintenance of pregnancy. FLAVECO improves metabolism of protein, fats and fatty acids, which are vital to the production of these hormones, helping to restore normal cycling after delivering and reducing the incidence of infections of the reproductive tract, such as occurs from retained placenta.

FLAVECO also helps in maintenance of fat metabolism, which results in greater follicle size in the ovaries and larger corpus luteum, the structures responsible for progesterone production. This hormone is necessary for normal implantation and nutrition of the newly formed embryo.

In addition, replacement heifers given FLAVECO have increased daily weight gains ⁽¹⁶⁾, so weigh more at first oestrus, have a greater first service conception rate, and weigh more at calving.

REFERENCES CITED

the

Flaveco

Story

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Pro(N8)ure[®]

Combines 3 essential elements: • Dual-strain Probiotic

- Prebiotic
- Prebiotic

LIVAMOL

Multi-strain Enzyme

These 3 elements form a natural microflora management tool for improved digestion resulting in better performance and good health.



The concept behind the Pro(N8)ure[®] range is to develop, manufacture and market products for livestock like cattle, pigs, poultry, sheep, horses that are efficacious, safe, sustainable and environmentally friendly.

The ingredients used in Pro(N8)ure are selected on the basis that they meet or exceed these criteria:

Efficacious: As with all the actives that we select for our products they must work as stated on the product label. It is important that each dose delivers the right amount to the animal.

Safe: Ingredients selected should be GRAS (Generally Regards As Safe) rated therefore they could for example be used in human food.

Sustainable: Both the actives and other ingredients used within each product need to be capable of being maintained at a constant level without exhausting natural resources or causing severe ecological damage.

Environmentally friendly: Both the actives and other ingredients used within these products need to be safe, non-toxic and residue free to animals, farmers and the environment.

So the types of actives that are used in Pro(N8)ure include; probiotics, prebiotics and enzymes.

Each of the Pro(N8)ure ingredients, has the ability to withstand steam, high temperatures and pressure as used by commercial feedmills to make pellets or mash, loose mixes or premix and supplements.

Each of the Pro(N8)ure ingredients either singularly or collectively are compatible with vitamins, minerals, amino acids, coccidiostats, medications, acidifiers, flavours, colours etc.



LIVAMOL[®] Feed Optimiser has been formulated:

- 1. To make it easy for cattle owners to make up their own feeds.
- 2. For use with Livamol, Australia's Leading Coat Conditioner.
- 3. To give cattle owners flexibility to customise feeds, for individual cattle when necessary.



You can use any of the following products with Livamol Feed Optimiser & Livamol:

IAH for every need.



ProN8u

D-Scour Paste (To treat and control scours)

Manomix

(To improve topline or where additional energy or protein maybe required)

ProN8ure, multi-strain probiotic

(To improve gut function and feed digestibility, treat and control scours, for use as a post antibiotic therapy and to establish or maintain healthy gut microflora)

Nutritional Analysis

As Fed	%	Min.	Max.
Minimum Crude Protein	16%		
Minimum Crude Fat	6%		
Moisture	8%		
Acid Detergent Fibre (ADF)	8%		
Neutral Detergent Fibre (NDF)	15%		
Starch	8%		
Calcium (Ca)		5%	6%
Phosphorus (P)		1.2%	1.5%
Salt	0.6%		
Average Metabolizable Energy	8 MJ/kg		

Vitamins	Pe	er kg
Vitamin A	10	0,000 IU
Vitamin D3	80	00 IU
Vitamin E	10	00 IU
VI CASE		
Amino Acid		Per kg
Amino acid Trimethylglycin	e	2 g
HO X	2	X
Feed Additive		mg/kg

40

and the second se	ALL
Minerals	g/kg
Calcium	50
Phosphorus	9
Potassium	2.5
Sodium	12.7
Chloride	9.5
Magnesium	14
Sulfur	1.2

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Trace Minerals	mg/kg
Iron	800
Zinc	2000
Copper	320
Manganese	640
lodine	6.8
Cobalt	20
Selenium	10

ALSO CONTAINS

Flavophospholipol

- Omega 3 and 6 Fatty acids
- Built in buffers

Creating the dietary balance



LIVAMOL FEED OPTIMISER

> Amount of roughage and concentrate varies according to individual body condition, stage of growth / breeding and activity

CONCENTRATES: Grains/Protein meals

ROUGHAGE: Pasture/Hay/Chaff

Suggested Feed rations

using Livamol Feed Optimiser Pellets

All based on Australian feed ingredients data

BULLS	PER DAY
Barley/Oats ¹ *	3 - 5kg
Canola/Lupins ² *	½ - 1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	½ - 1 cup
Pasture/Hay	Ad lib

Lactating COWS	PER DAY
Barley/Oats ^{1*}	3 - 5kg
Canola/Lupins ² *	1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	1 cup
Pasture/Hay	Ad lib

Dry COWS	PER DAY
Barley/Oats ^{1*}	2 - 3kg
Canola/Lupins ² *	
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	
Pasture/Hay	Ad lib

HEIFERS	PER DAY
Barley/Oats ^{1*}	3 - 5kg
Canola/Lupins ² *	½ - 1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	
Pasture/Hay	Ad lib

WEANERS	PER DAY
Barley/Oats ^{1*}	1 - 3kg
Canola/Lupins ² *	½ - 1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	½ - 1 cup
Pasture/Hay	Ad lib

YEARLINGS	PER DAY
Barley/Oats ^{1*}	1 - 3kg
Canola/Lupins ² *	½ - 1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	
Pasture/Hay	Ad lib

STEERS	PER DAY
Barley/Oats ^{1*}	3 - 5kg
Canola/Lupins ² *	½ - 1kg
OPTIMISER	2 cups
LIVAMOL	2 cups
Vegetable oil	½ - 1 cup
Pasture/Hay	Ad lib

Please be advised feeding rates are intended as a guide only and may need to be altered according to individual cattle body condition, requirements and the environment.

Take care in introducing grain, feed about half suggested amount and increase over 5-7 days (see P10 Built in buffers).

- *1 Rolled/Steam Rolled Barley or Rolled/ Crushed Oats minimum 10% crude protein
- *² Canola Meal or Crushed Lupins 32% minimum crude protein
- * Alter according to growth and body condition
- ^t Ad lib = Free access

Please contact IAH Sales or visit our website www.iahp.com.au for individual dietary advice or for the formulation of diets for your cattle.







STUD/ SHOW

While good nutrition, based on a balanced diet is essential to produce the desired body condition and growth rates, there is an art to turning out a gleaming, well trained animal.

LIVAMOL® AUSTRALIA'S LEADING COAT CONDITIONER

Coat condition is a key indicator of the overall health of any animal. Livamol has been used for many years in show diets for its nutritional benefits as well as its effects on coat colour and shine. Livamol is a unique combination of prime protein meals with cod liver oil, calcium, phosphorus, vitamins and minerals fused with dried molasses. The result is a highly palatable meal, ideal for boosting the protein content of rations. Livamol is famous for its ability to bring a new richness to the coats of all show cattle.

Available in 2kg, 10kg, 20kg

LIVAMOL SUDSTM 'ALL IN ONE' SHAMPOO AND CONDITIONER

A highly concentrated blend of non-irritating ingredients foams away dirt and conditions the coat to a cleaner, softer and glossier finish. Livamol Suds rich, thick, lemon scented formula is easy to use, reduces waste and rinses away easily. Livamol Suds is ideal for weekly grooming or as the first step in full show preparation.

Available in 750mL

REMOVES STAINS, BRIGHTENS COLOURS, WHITENS WHITES

An effective cleanser for removing even the toughest manure and grass stains from the coats and tails of show cattle. Livarnol Blu cleans the yellowing' from whites, brings out the richness and depth in dark colours and gives light colours a reflective brightness. Available in 750mL

LIVAMOL GLO M A BRILLIANT FINISHING POLISH, THE FINAL STEP IN GROOMING

Livamol Glo is the ultimate spray-on finishing touch, giving a lasting brilliant shine to coats while keeping tails tangle-free. Special ingredients give a satin-smooth feel to the coat and actually repel dirt and dust to keep cattle looking their best, longer

Available in 750mL

LEATHER NEW M SELF-POLISHING CLEANSER FOR ALL LEATHER

Leather New removes dirt and grime and imparts a brilliant shine, while natural animal oils penetrate to restore condition and suppleness to the hide. Leather New won't darken most leather and won't stain clothes or coats. Use for boots, halters, leads and any leather equipment. Available in 500mL

PARASITE CONTROL

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Internal parasite infestations can lead to production losses through reduced growth rates, reduced milk production and general ill-thrift.

Where worm burdens are heavy, health problems including scouring, anaemia and increased susceptibility to disease are seen. In severe cases, particularly with young stock, deaths can occur.

AUSMECTIN[®] CATTLE POUR-ON Ivermectin 5mg/mL

AUSMECTIN® Cattle Pour-On is a ready-to-use solution of ivermectin, which is a member of the avermectin family. The avermectins are potent broad-spectrum antiparasitic agents, which are isolated from fermentation of the naturally occurring soil organism, *Streptomyces avermitilis*.

- Pour-on control and treatment of Ivermectin sensitive internal and external parasites.
- Dose rate. 1mL per 10kg of body weight.
- Excellent residual protection against parasitic reinfestation.
- Effective in control of: gastrointestinal roundworms, lungworm, eye worm, sucking and biting lice, sarcoptic and chorioptic mange mites, buffalo fly and cattle ticks. (see chart)
- Withholding: Meat 42 days: Milk: Nil withholding period.



FLINT'S MEDICATED





TO CLEANSE AND TREAT CUTS, WOUNDS, ABSCESSES AND ULCERS

The organic acids in Wound Klense assist in the cleaning and removal of embedded dirt, debris and dead or dying tissue (proud flesh) from wounds, helping in the regeneration of healthy tissue. Propylene glycol, a non-greasy additive prevents wounds drying out and promotes more rapid healing. Wound Klense is a clear, non-staining solution in a convenient 500mL spray pack.

NON-STINGING ANTI-MICROBIAL SPRAY

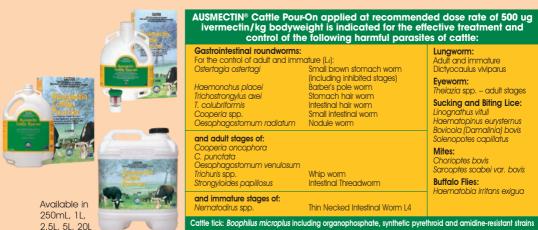
Buffered lodine is the product of choice for the treatment of bacterial and fungal infections in animals.

It helps protect wounds, cuts and abrasions from becoming infected and can be used for navel disinfection, castration, dehorning wounds and cut teats. Buffered lodine is also an excellent skin disinfectant prior to surgery or injections.

Available in a convenient 500mL spray pack.

FLINT'S MEDICATED OIL ASSISTS IN THE HEALING OF CUTS, WOUNDS AND GALLS.

A trusted treatment since 1892, Flint's Medicated Oil is safe, aentle and soothing to use on open wounds, heavy cuts and lacerations. It has a long / lasting effect, heals from the inside out and is effective in repelling flies from the wound site. Flint's is regularly recommended by veterinarians. There's only one reason a product stays around for more than 100 years! Available in 200mL, 500mL, 1L



Cattle tick: Boophilus microplus including organophosphate, synthetic pyrethroid and amidine-resistant strains

As part of our nutritional support service, you are invited to submit your current feeding program to our nutritional specialists. Your current feeding program will be reviewed and a new ration will be formulated for you incorporating Livamol Feed Optimiser Pellets for Cattle.

Whether you show cattle, participate in stud bull sales or a feedlot operator IAH has a range of solutions to meet your needs. Our role is to help you maximise your returns and assist by providing practical solutions to those everyday issues. For further information you can visit our website, request a brochure or product folder and phone us to discuss your individual needs.

The science of feed made easy!

Simply go to: www.iahp.com.au

Dietary Evaluation Service



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