



A combination rumen buffer with live yeast, essential oils and betaine to be fed from April to October when heat stress impacts performance and fertility. KW ChilliBuf acts to maintain an optimum rumen pH, promote feed intake, and improve animal / cell hydration enabling an improved performance in heat stress conditions.

## Why feed Chilibuf?

To support today's higher milk yields in dairy cows, animals need to consume and digest increasing quantities of high energy feeds. This can result in sub-optimal conditions in the rumen where excess acid is produced as a result of highly fermentable feeds being rapidly digested. An increased acid load reduces rumen pH to create sub-acute ruminal acidosis (SARA) or even acidosis. These conditions lead to feed not being fully digested in the rumen, resulting in lower than expected milk and/or constituent yields. This issue is accentuated by periods of heat stress (temperatures above 19°C and 25% humidity). Furthermore, many preserved forages have high acid loads (cereal silages and low dry matter grass silages especially) and contribute to depression of rumen pH (even lush spring grass can have this effect).

## KW ChilliBuf contains;

**Acid Buf** – High surface area algal material, with a honeycomb structure that gives sustained buffering over a long period of time, improving milk yield and live weight gain when fed in acidic rations. It also contains a good source of calcium and magnesium.

**Sodium Bicarbonate** – Well known for its quick and effective buffering capacity.

**Vistacell Live Yeast** - Vistacell improves rumen fermentation by scavenging oxygen which is toxic to rumen microbes; reducing the number of bacteria that produce lactic acid and increasing the lactic acid utilising bacteria, this elevates rumen pH which means fibre-digesting bacteria are positively affected. Additionally, Vistacell supplies specific nutrients that stimulate the growth of fibre digesting bacteria. The risk of acidosis when feeding highly fermentable concentrate and acidic forage is therefore reduced, and fibre digestion improved. The overall effect is improved fibre digestion and dry matter intake, resulting in greater productivity, better condition score and improved dung consistency.

**Xtract**- A micro-encapsulated combination of active substances naturally occurring in aromatic plants and spices (Eugenol from cloves, Cinnamaldehyde from cinnamon and Capsicum from chilli peppers). Xtract also improves energy extraction from feed through reduced methane production and an increased production of more favourable volatile fatty acids (VFAs), specifically propionate, which is less acidic than lactic acid in the rumen and drives milk production. Xtract increases the efficiency of protein metabolism and increases feeding and drinking frequency.

**Betaine** – Betaine is in osmolyte and helps cells to maintain hydration during times of heat stress. If cells become dehydrated it results in osmotic stress and possible cell damage. Betaine is also a highly efficient methyl donor. Methyl donors play an important role in metabolic pathways.



## What are you trying to achieve?

| Need                                | Feature                                                                                                                                                                                                                                                                                                                                 | Benefit                                                                                                                                                                                                                    |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Support milk yield and constituents | Concentrated, live yeast (Vistacell); Eugenol and Cinnamaldehyde increase supply of propionate to drive milk production. Capsicum increases meal frequency and intake. AcidBuf helps to buffer changes in rumen pH ensuring the rumen environment is optimised                                                                          | Milk yield and constituents can be maintained or even increased.<br><br>Vistacell has been shown to increase milk yield by up to 2 litres/cow/day.                                                                         |
| Maintain performance in hot weather | Capsicum increases drinking frequency and saliva production, increasing evaporative cooling and buffering capacity. Eugenol and cinnamaldehyde reduce heat generated from fermentation. Betaine is an osmolyte and helps maintain cell hydration. It is also an effective Methyl donor which play important roles in metabolic pathways | Maintenance of intakes and performance in times of heat stress, improved feed conversion efficiency.                                                                                                                       |
| Support reproductive performance    | Direct impacts of heat stress on fertility are caused by impairing cellular function of reproductive cells. Indirectly fertility problems are increased through heat stress because of a reduced feed intake- ChilliBuf helps support intakes and supports cell hydration                                                               | Heat stressed cows have a higher number of inseminations and lower conception rate, if we can prevent or minimise heat stress, we can help protect reproductive performance through the summer months.                     |
| Highly stable                       | Heat stable live yeast and Iso-Fusion™ microencapsulation technology. Excential Beta-key is non-hygroscopic                                                                                                                                                                                                                             | Vistacell yeast has excellent stability to heat, atmospheric moisture and acidic silage. Microencapsulation technology ensures long-lasting Xtract activity ensuring maximum response once KW ChilliBuf reaches the rumen. |
| Easy to handle                      | Friable free flowing granules available in bags                                                                                                                                                                                                                                                                                         | KW ChilliBuf is sold as a ready-to-use premix, making it easy to handle and incorporate into rations                                                                                                                       |

The predicted responses (benefits) assume that the specified nutrient, physical or structural dietary components are limiting livestock performance in the current ration.



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## **Recommended daily feed rates** (per head basis) Include in TMR, top-dress over forage, include in a blend.

Feed to lactating cows from April up to October

Feeding rate: 125g/head/day to Dairy cows.

## **Availability, handling and storage**

- Store in cool, dry conditions and use within 1 year from date of manufacture.
- Packed in 25kg bags, delivered on a 1t pallet.
- Stack pallets no more than two high.
- Delivery available nationally within 7-10 working days

## **Additional information**

### **Method of production**

Live yeasts are fragile and must be delivered to the rumen in the live form, otherwise the benefits are lost. Vistacell is produced using a specialist drying process that results in the production of granules which have an outer layer of dead yeast cells protecting the inner 'core' of live yeast. This gives a highly stable product, resulting in a greater response from the animal when fed. Vistacell is specifically manufactured by AB Mauri Ltd, a sister company of AB Agri Ltd. Xtract contains naturally occurring active substances Eugenol, Cinnamaldehyde and Capsicum Oleoresin which have been micro-encapsulated using ISO-FUSION™ technology to produce a stable and long-lasting product. Xtract is manufactured by Pancosma. Acid Buf is manufactured from calcareous marine algae harvested off the coasts of Ireland and Iceland. In the process of growth, the live plant develops a white calcareous skeleton. This is harvested, washed, dried, ground and bagged. Acid Buf contains three calcium structures, helping to provide a sustained buffering effect. Excential Bet-Key is manufactured by ORFFA and is a solid preparation of Betaine Hydrochloride.

### **Quality Assurance**

Vistacell (CAS 68878-77-7), Cinnamaldehyde (CAS 104-55-2), Eugenol (CAS 97-53-0), Capsicum oleoresin (CAS 2444-64-4), Excential Beta-Key (Betaine) (CAS 590-46-5) and Sodium Bicarbonate (CAS 11-4-2) comply with Feed Additives Regulation 1831/2003 where they are authorised for inclusion in the diets of dairy cows, beef cattle, sows and piglets.

KW ChilliBuf is produced to FEMAS assured standards.

### **Legal Disclaimer**

Suggested feeding rates are produced as a guide only and many other factors may have an overriding effect on animal response; no performance guarantee can be given. Rations should be carefully balanced for energy and protein, contain sufficient forage to maintain rumen function and be fortified with an appropriate vitamin and mineral supplement. Animals must have constant access to clean water.



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